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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 2 to Document 80(Add.13)-E** |
|  | **7 October 2019** |
|  | **Original: English** |
|  | |
| Japan | |
| 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)**;

Introduction

This document presents the proposals from Japan 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.

Proposal

Japan supports the APT common proposals for the frequency bands 37-40.5, 40.5-42.5 and 42.5-43.5 GHz under WRC-19 agenda item 1.13, i.e. identifying the 37-43.5 GHz frequency band, or portions thereof, for IMT globally through Methods C2, D2 and E2 with Alternative 2 of the CPM Report together with a new WRC Resolution.

In order to complement these APT common proposals, Japan proposes the additional provisions in the new WRC Resolutions as presented below.

ADD J/80A13A2/1#49927

DRAFT NEW RESOLUTION [J-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

…

*j)* that ITU‑R has studied, in preparation for WRC‑19, sharing and compatibility with services allocated in the frequency band 37-43.5 GHz and its adjacent band, based on the characteristics available at that time;

*k)* that the results of ITU‑R compatibility studies of IMT‑2020 systems are probabilistic, and therefore the deployment parameters of IMT‑2020 systems that affect compatibility with satellite receivers may vary during practical implementation and deployment of IMT‑2020 networks;

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

*m)* 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,

…

recognizing

…

*f)* that ITU-R demonstrated the feasibility of sharing between IMT and FSS (E-to-s) in the frequency band 42.5-43.5 GHz based on a set of baseline parameters including the IMT base stations deployment density of 1 200 per 10 000 km2,

resolves

…

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

TABLE 1

|  |  |  |  |
| --- | --- | --- | --- |
| EESS (passive) band | Active service band | Active service | Limits of unwanted emission power from IMT‑2020 stations in a specified bandwidth within the EESS (passive) band1 |
| 36-37 GHz | 37‑40.5 GHz | Mobile | [TBD] dB(W/100 MHz) for BS and  [TBD] dB(W/100 MHz) for UE |
| 1 The unwanted emission power level is measured by total radiated power (TRP). The TRP is to be understood here as the integral of the power transmitted in different directions over the entire radiation sphere. | | | |

2 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 except when the base station is only receiving.

invites ITU‑R

…

2to develop ITU‑R Recommendations, as appropriate, to provide information on possible coordination and protection measures for the existing and future SRS earth stations operating in the frequency band 37-38 GHz;

3 to regularly review the impact of the evolution of IMT technical and operational characteristics (including deployment and base-station density taking into account the baseline parameters referred to in *recognizing* *f)* above) 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;

**Reasons:** Japan supports identifying the frequency band 37-43.5 GHz for IMT together with the conditions shown in the above new WRC Resolution. For the protection measures for the EESS (passive) in the 36-37 GHz frequency band, Japan is investigating to choose Option 1 under Condition C2a of the CPM Report. As for the TBD values in Table 2, Japan is studying to choose a value within –47 to –33 dB(W/100 MHz) for IMT base stations and –46 to –32 dB(W/100 MHz) for IMT mobile stations, respectively. Japan is also studying additional further relaxation in these unwanted emission limits of IMT stations associated with the interference criterion for the EESS (passive) sensors in the 36-37 GHz frequency band presented in Recommendation ITU-R RS.2017, i.e., which allows for 0.1 % in time or area of the 10 000 000 km² to exceed the interference criterion.

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1. \* It is assumed that only a very limited number of IMT mobile stations will be communicating with IMT base stations whose main beam pointing are above the horizon. [↑](#footnote-ref-1)