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| APTlogogreen3 | ASIA-PACIFIC TELECOMMUNITY |  |
| **The 21st Meeting of the APT Wireless Group (AWG-21)**  |  |
| 3 – 7 April 2017, Bangkok, Thailand |  |

**Questionnaire on USAGE AND FUTURE PLAN OF FREQUENCY BANDS IN RELATION TO STUDIES ON WRC-19 AGENDA ITEM 1.13
IN ASIA-PACIFIC REGION**

**Section 1: Elementary Part**

1. **Introduction:**

The World Radiocommunication Conference 2015 (WRC-15) approved WRC-19 agenda item 1.13:

 ***Agenda item 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 [COM6/20] (WRC‑15)***

***Resolution 238 [COM6/20] (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*

In Resolution **238 [COM6/20] (WRC-15)**, ITU-R is resolved to conduct the appropriate studies on the spectrum needs for the terrestrial component of IMT in the frequency range between 24.25 GHz and 86 GHz, and to conduct the appropriate sharing and compatibility studies[[1]](#footnote-1), taking into account the protection of services to which the band is allocated on a primary basis, for the frequency bands:

*- 24.25-27.5 GHz[[2]](#footnote-2), 37-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz, which have allocations to the mobile service on a primary basis; and*

*- 31.8-33.4 GHz, 40.5-42.5 GHz and 47-47.2 GHz, which may require additional allocations to the mobile service on a primary basis,*

WRC-19 is resolved to consider identification of frequency bands for the terrestrial component of IMT; the bands to be considered being limited to part or all of the bands listed above.

CPM 19-1 decided to invite Study Group 5 to establish a Task Group (TG 5/1), in which all involved parties in the frequency bands and services mentioned in Resolution **238 [COM6/20] (WRC-15)** are invited to actively participate, as the responsible group for WRC-19 agenda item 1.13; and TG 5/1 is responsible for conducting the sharing and compatibility studies, in accordance with Resolution **238 [COM6/20] (WRC 15)**, based on input from ITU-R Working Party 5D, working parties of Study Group 3 and other involved working parties, and the development of draft CPM text under WRC-19 agenda item 1.13 and that it will submit such text directly to the CPM-19 process.

It should be noted that the APT Conference Preparatory Group (APG) for WRC-19 is responsible for developing APT positions on WRC-19 agenda item 1.13.

1. **Objective of the Questionnaire:**

To facilitate the studies and developing APT positions in relation to WRC-19 agenda item 1.13 in APG, AWG-19 developed a questionnaire to collect information on usage and future plan as well as other relevant information for the following frequency bands in the Asia- Pacific Region:

24.25-27.5GHz, 31.8-33.4 GHz, 37-43.5 GHz, 45.5-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz.

It should be noted that this frequency bands list is the same as that within Resolution **238 [COM6/20] (WRC-15)**.

This questionnaire contains five questions to collect information of current spectrum usage, relative system characteristics, progress on sharing/compatibility studies in APT Members, and future plan on the concerned bands. The survey results obtained by compiling the responses from APT Members will be contributed to APG19-2, to facilitate the study in APG, and assist APT Members for their consideration on studies in relation to WRC-19 agenda item 1.13.

In order to provide the study result to APG19-2 meeting in a timely manner, it is encouraged APT Members to provide their responses to the next 20th meeting of AWG in 3Q 2016 and no later than the 21st meeting of AWG in 2017.

At the 21st meeting of AWG in April 2017, it was decided to recirculate the questionnaire and encourage the APT Members providing further responses and any updates including further details of current usage and plans no later than the 23rd meeting of AWG in 2018. Summary of the received responses so far from some APT Members is available in Document [AWG-21/TMP-51(Rev.1)](http://www.apt.int/sites/default/files/2017/04/AWG-21-TMP-51Rev.1_WD_AI1.13_questionnaire_report_r2.docx).

It should be noted that every APT Member does not necessarily need to respond to all the questions and/or concerned frequency bands.

1. **Responsible Group:**

WG Technology Aspects / Sub-WG IMT

1. **Rapporteur of the Questionnaire:**

 Ms. Boya Lyu (CHN)

1. **Meeting at which the Questionnaire was approved:**

The 21st meeting of APT Wireless Group

1. **Target Responder:**

APT Members

1. **Deadline for Responses:**

No later than the 23rd meeting of APT Wireless Group

**Section 2: Questionnaire Part**

1. **Current usage**

**Question 1:** What is/are current allocation(s) (e.g. mobile service, fixed service, mobile-satellite service), application(s) (e.g. CDMA, UMTS, LTE, GMR, EGAL, etc.) and assigned/licensed in the bands listed above (or part(s) bands) in your country?

**Answer:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Frequency** **Ranges** | **Sub Ranges** | **Service****(Please indicate frequency range(s) for each service)** | **Applications** | **Status****(e.g. Commercial Operator/ License duration)** |
| 24.25-27.5 GHz |  aa-bb GHz | 1. |  |  |
| 2. |  |  |
| … |  |  |
| cc-dd GHz |  |  |  |
| … |  |  |  |
| 31.8-33.4 GHz |  |  |  |  |
| 37-43.5 GHz |  |  |  |  |
| 45.5-50.2GHz50.4-52.6GHz |  |  |  |  |
| 66-76 GHz81-86GHz |  |  |  |  |

**Question 2:** Please describe technical and operational characteristics of the existing services/applications that would be necessary for consideration in sharing/compatibility studies of applications in the bands listed above (or part(s) bands). For the system characteristics, for example, relevant information based on Table X and/or reference to ITU-R Report/Recommendation or Regulation/Rule/study in your country can be provided.

**Answer:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Frequency** **Ranges** | **Sub****Ranges** | **Applications** | **System Characteristics** |
| 24.25-27.5 GHz | aa-bbGHz | 1. |  |
| 2. |  |
| … |  |
| cc-dd GHz |  |  |
| …… |  |  |
| 31.8-33.4 GHz |  |  |  |
| 37-43.5 GHz |  |  |  |
| 45.5-50.2GHz50.4-52.6GHz |  |  |  |
| 66-76 GHz81-86GHz |  |  |  |

**Table X**

|  |  |
| --- | --- |
| **Parameters** | **Value** |
| Max. transmitter power (dBm) |  |
| Bandwidth (MHz) |  |
| Tx/Rx antenna | Gain (dB) |  |
| Pattern (if many, provide closest one to omnidirectional) |  |
| Antenna type |  |
| Height (m) |  |
| Polarization (if any) |  |
| Protection criteria (I/N) |  |
| Noise temperature (K) |  |
| Feeder loss (dB) |  |
| Deployment status (Coverage)  |  |
| Other parameters for sharing studies if any |  |

**Question 3:** What are the main concerned allocation and applications to be protected including within and adjacent to this range, and the type and extent of current use?

**Answer:**

|  |  |  |
| --- | --- | --- |
| **Frequency** **Range** | **Sub****Range** | **Main concerned allocation and application** |
| 24.25-27.5 GHz | aa-bb MHz |  |
| **……** |  |
| 31.8-33.4 GHz |  |  |
| 37-43.5 GHz |  |  |
| 45.5-50.2GHz50.4-52.6GHz |  |  |
| 66-76 GHz81-86GHz |  |  |

**(2) Future plan**

**Question 4:** Do you have planned or potential future services and applications in the bands listed above (or part(s) bands), if YES, what is/are planned or potential future services and applications in the bands?

**Answer:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Frequency** **Ranges** | **Sub****Ranges** | **Planned/Future services and applications**  | **Timeline** |
| 24.25-27.5 GHz | aa-bb GHz | 1 |  |
| 2 |  |
| … |  |
| cc-dd GHz |  |  |
| …… |  |  |
| 31.8-33.4 GHz |  |  |  |
| 37-43.5 GHz |  |  |  |
| 45.5-50.2GHz50.4-52.6GHz |  |  |  |
| 66-76 GHz81-86GHz |  |  |  |

**(3) Others**

**Question 5**: Do you have any additional issue to be addressed for the bands listed above (or part(s) bands)? What is the issue?

**Answer:**

|  |  |  |
| --- | --- | --- |
| **Frequency** **Range** | **Sub****Range** | **Issue to be addressed** |
| 24.25-27.5 GHz | aa-bb MHz |  |
| **……** |  |
| 31.8-33.4 GHz |  |  |
| 37-43.5 GHz |  |  |
| 45.5-50.2GHz50.4-52.6GHz |  |  |
| 66-76 GHz81-86GHz |  |  |

\_\_\_\_\_\_\_\_\_\_\_\_

1. Including studies with respect to services in adjacent bands, as appropriate. [↑](#footnote-ref-1)
2. When conducting studies in the band 24.5-27.5 GHz, to take into account the need to ensure the protection of existing earth stations and the deployment of future receiving earth stations under the EESS (space-to-Earth) and SRS (space-to-Earth) allocation in the frequency band 25.5-27 GHz. [↑](#footnote-ref-2)