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|  | ASIA-PACIFIC TELECOMMUNITY | |
| **The APT Wireless Group (AWG)** |  |
|  | **5 February 2016** |

**QUESTIONNAIRE on THE Usage and future plans of the bands 17.7-20.2 GHz and 27.5-30 GHz in THE Asia-Pacific Region**

**Section 1: Elementary Part**

1. **Introduction:**

At AWG-19, TG-MSA discussed the increasing need for broadband mobile-satellite communications in recent years. Some of this need could be met by allowing Earth stations in motion (ESIMs) to communicate with geostationary (GSO) fixed-satellite service (FSS) satellite networks in the Ka-band. Some administrations have already deployed ESIMs in the Ka-band i.e. 19.7-20.2 GHz and 29.5-30 GHz in current operational GSO FSS networks, and/or plan to expand their use in their future satellite systems.

On the application of ESIMs in the adjacent bands of 17.7-19.7 GHz and 27.5-29.5 GHz in the GSO FSS networks, a new Agenda Item 1.5 was established for the WRC-19 study cycle according to Resolution 158 (WRC-15). Agenda Item 1.5 is to study the technical and operational characteristics and user requirements of different types of ESIMs that operate or plan to operate within geostationary FSS allocations in the two bands, and also study sharing and compatibility between ESIMs operating with GSO FSS networks and current and planned stations of existing services allocated in the same frequency bands to ensure the protection of existing services. When all these studies are completed and agreed by the ITU-R study groups, WRC-19 is invited to consider the results of the above studies and take necessary actions, as appropriate.

The meeting agreed that in order to assist APG studies under Agenda Item 1.5 of WRC-19, it would be beneficial to understand the spectrum usage and domestic regulations in the Ka-band in different APT Member countries. As such, TG-MSA agreed gather information on the spectrum usage and domestic regulations in the Ka-band in the Asia-Pacific region through a questionnaire.

1. **Objective of the Questionnaire:**

The purpose of this report is to gather information on the spectrum usage and regulation status of the bands 17.7-20.2 GHz and 27.5-30 GHz in the Asia-Pacific region, which could help administrations to better understand the spectrum usage and the related regulations of the bands 17.7-20.2 GHz and 27.5-30 GHz in different APT Member countries. In addition, this Report could also provide information, as applicable, for APG studies under Agenda Item 1.5 of WRC-19.

1. **Responsible Group:**

Task Group on Modern Satellite Applications

1. **Rapporteur of the Questionnaire:**

Geetha Remy Vincent, [geetha@measat.com](mailto:geetha@measat.com) (chair of TG-MSA)

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

AWG-19 (Document: AWG-19/OUT-04)

1. **Target Responder:**

APT Members

1. **Deadline for Responses:**

AWG-20

**Section 2: Questionnaire Part**

1. **Abbreviations**

In this questionnaire, the following abbreviations are used:

ESIM : Earth Stations in Motion

MS : Mobile Service

FS : Fixed Service

FSS : Fixed Satellite Service

MSS : Mobile Satellite Service

1. **usage IN THE KA-BAND**

**Question 1:** What are the current allocations (e.g. mobile service (MS), fixed service (FS), fixed-satellite service (FSS), mobile-satellite service (MSS)), applications and licensee in the bands 17.7-20.2 GHz and 27.5-30 GHz in your country?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Band** | **Sub-bands** | **Service Allocations** | **Applications** | **Commercial Operator** | **License duration** |
| 17.7-20.2 GHz | … |  |  |  |  |
| … |  |  |  |  |
| 27.5-30 GHz | … |  |  |  |  |
| … |  |  |  |  |

**Question 2:** Which parts of the bands 17.7-20.2 GHz and 27.5-30 GHz are being used by satellite systems in your country? What kinds of satellite services/applications are currently being deployed or planned to be deployed?

**Question 3:** Which part(s) of 17.7-20.2 GHz and 27.5-30 GHz frequency bands are being used or planned to be used by terrestrial systems in your country? What kind of terrestrial services/applications are currently being deployed or planned to be deployed?

**Question 4:** How do you achieve or plan to achieve sharing/compatibility between terrestrial and satellite services (provide technical characteristics if applicable) in the bands 17.7-20.2 GHz and 27.5-30 GHz?

**Question 5:** Have you deployed or plan to deploy Earth Stations in Motion (ESIMs) in the Ka-band?

Yes [go to question (6)]

No [go to question (8)]

**Question 6:** What are the specific bands being involved and what kinds of platforms are used e.g. ships, aircraft and land vehicles?

**Question 7:** If ESIMs are deployed or planned to be deployed in both the 19.7-20.2 GHz & 29.5-30 GHz and 17.7-19.7 GHz & 27.5-29.5 GHz bands, are there any difference in the operational characteristics and/or management policies in the two different parts of Ka-band? If yes, please explain.

**Question 8:** What are your country’s current policies on the operations of satellite systems in the bands 19.7-20.2 GHz & 29.5-30 GHz and 17.7-19.7 GHz & 27.5-29.5 GHz?

**Question 9:** Further to question (8), are these laws, decrees, legal instruments publicly available? If yes, please provide website hyperlink.

**Question 10:** In your opinion, what are the technical and operational requirements of ESIMs applications in Ka-band?

**Question 11:** In your opinion, what ESIMs characteristics are of top importance for the operation of ESIMs in the FSS Ka-band in your country? (e.g. antenna diameter, off-axis e.i.r.p. density levels, tracking and pointing accuracy, network control and monitoring center, cost, etc.)

1. **Others**

**Question 12:** Do you have any suggestions for satellite use of the bands 17.7-20.2 GHz and 27.5-30.0 GHz to be studied by AWG?

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