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| APTlogogreen3 | ASIA-PACIFIC TELECOMMUNITY | **Document:**  |
| **The 2nd Meeting of the APT Conference Preparatory Group for WRC-19 (APG19-2)** | **APG19-2/OUT-09** |
| 17 – 21 July 2017, Bali, Republic of Indonesia | **21 July 2017** |

Working Party 3

**PRELIMINARY VIEWs on WRC-19 agenda item 9.1 Issue 9.1.9**

**Agenda item 9.1 - Issue 9.1.9:**

*Studies relating to spectrum needs and possible allocation of the frequency band 51.4-52.4 GHz to the fixed-satellite service (Earth-to-space), in accordance with Resolution* ***162 (WRC-15)****.*

**1. Background**

WRC-19 agenda item 9.1, issue 9.1.9, in accordance with Resolution **162 (WRC-15)**, invites ITU-R to conduct studies relating to spectrum needs and possible allocation of the frequency band 51.4-52.4 GHz to the fixed-satellite service (Earth-to-space) limited to feeder links for geostationary satellite orbit use.

Working Party 4A (WP 4A) has been identified as the responsible ITU-R group for the studies on WRC-15 Agenda item 9.1, issue 9.1.9. The latest WP4A meeting in May 2017 has made progress in preliminary draft new report ITU-R S. [Spectrum\_needs] (Annex 3 to document 4A/364) and working document towards a preliminary draft new report ITU-R S. [Spectrum\_Sharing] (Annex 18 to document 4A/364).

In preliminary draft new report ITU-R S. [Spectrum\_needs], current status of the 50/40 GHz frequency range for FSS, justification of the additional 1 GHz FSS allocation (Earth-to-space) in the 51.4-52.4 GHz band, examples of FSS applications relating to the additional spectrum needs to provide broadband service and estimation of propagation loss for feeder link in 50/40 GHz are included.

In working document towards a preliminary draft new report ITU-R S. [Spectrum\_Sharing], sharing and compatibility studies are presented with respect to fixed service, mobile service, radio astronomy service, earth exploration-satellite (passive) and the space research (passive) services in the same and/or adjacent bands.

**2. Documents**

* Input Documents: relevant part of APG19-2/INP-10 (KOR), INP-30 (AUS), INP-51 (CHN)
* Information Documents: relevant part of APG19-2/INF-1 (Chair, APG-19), INF-4 (CITEL), INF-5 (RCC), INF-14 (CEPT)

**3. Summary of Discussions**

**3.1 Summary of Members’ view**

**3.1.1 Korea (Rep. of)**

The Republic of Korea supports ITU-R studies relating to spectrum needs and possible allocation of the frequency band 51.4-52.4 GHz to the fixed-satellite service (Earth-to-space) in accordance with Resolution **162 (WRC-15)**.

The Republic of Korea has a view that, subject to justification resulting from studies considering additional spectrum needs for development of the fixed-satellite service, sharing and compatibility studies should be conducted to ensure protection of existing services allocated to the same and adjacent bands as appropriate from new possible primary allocations to the fixed-satellite service in the band 51.4-52.4 GHz limited to feeder links for geostationary satellite orbit use.

**3.1.2 Australia**

Australia supports consideration of an allocation to the fixed-satellite service (Earth-to-space) in the frequency band 51.4-52.4 GHz, subject to satisfactory outcomes of ITU-R studies related to spectrum needs and compatibility with co-frequency and adjacent band services, in accordance with Resolution **162 (WRC-15)**.

**3.1.3 China (People’s Republic of)**

China Supports ITU-R to conduct studies on spectrum needs for development of the FSS in the 40/50 GHz band. China also supports ITU-R to conduct compatibility studies between FSS with existing services currently allocated as FS, MS in the same bands and as EESS (passive), SRS (passive) in the adjacent bands.

China is of views that additional spectrum allocation of 1GHz to the FSS (Earth-to-space) in the 51.4-52.4 GHz band limited to FSS feeder links for geostationary orbit use can be considered under the condition that the results of ITU-R studies show compatibility with existing services currently allocated.

**3.2 Key points raised during the meeting**

* None.

**4. APT Preliminary View(s)**

APT Members support ITU-R studies relating to spectrum needs, sharing and compatibility between fixed-satellite service in the frequency band 51.4-52.4 GHz and other co-frequency, and adjacent band services in accordance with Resolution **162 (WRC-15)**.

APT Members are of the view that consideration of an allocation to the fixed-satellite service (Earth-to-space) in the frequency band 51.4-52.4 GHz limited to feeder links for geostationary satellite orbit use is subject to satisfactory outcomes of ITU-R studies related to spectrum needs and compatibility with existing services allocated to the same and adjacent bands.

**5. Other Views**

* None.

**6. Views from Other Organisations**

**6.1 ASMG**

* Follow up current studies on this item.
* Ensure the protection of existing services, especially the fixed and mobile services that may be used extensively in Arab states.
* Consult with satellite operators with respect to their needs of spectrum in the frequency range 51.4-52.4 GHz.
* Consultation with concerned groups in ASMG on the proposed allocation of this band for IMT.

**6.2 CEPT**

CEPT supports studies on evaluation of additional spectrum needs for development of the fixed-satellite service in accordance with resolves to invite ITU-R 1 of **Resolution 162 (WRC-15)**. Such studies should be concluded before possible regulatory actions can be proposed under this issue of agenda item 9.1.

CEPT supports the sharing and compatibility studies with existing services for consideration of new primary allocation to the FSS in the frequency band 51.4-52.4 GHz (Earth-to-space) limited to FSS feeder links for geostationary orbit use.

To ensure the protection of the EESS (passive), operating in the band 52.6-54.25 GHz, CEPT supports to study the effects of aggregate interference from FSS GSO satellite networks in 51.4-52.4 GHz band and stations of existing terrestrial services allocated in 51.4-52.6 GHz band.

CEPT supports studies regarding the impact on radio astronomy observations in the band 51.4-54.25 GHz.

**6.3 CITEL**

**USA:**

The United States supports the study of all aspects of spectrum needs for the development of the fixed‐satellite service under Resolves 1 of Resolution **162**. The United States further supports the study as appropriate of possible primary allocation to the FSS of the frequency band 51.4‐52.4 GHz (Earth‐to‐space), limited to GSO FSS feeder links, under the terms of Resolution **162 (WRC‐15)** to ensure compatibility with existing services, including adjacent bands as appropriate. Such studies should determine the suitability, including protection of fixed and mobile services, of a new primary allocation to the FSS in the frequency band 51.4‐52.4 GHz (Earth‐to‐space), limited to FSS feeder links for geostationary orbit use, and the possible associated regulatory actions based on the results of these studies.

**6.4 RCC**

The RCC Administrations are in favor of justification of additional spectrum needs for the development of the fixed-satellite service in the frequency bands above 50 GHz, taking into account technical aspects of using the frequency bands already allocated to this service in the ranges above 30 GHz as well as the possibility to optimize their use based on the technology of FSS satellites with multiple-beam antennas and frequency reuse.

The RCC Administrations consider that the technical conditions and regulatory provisions, which are subject to the ITU-R studies, for use of new primary allocations to the FSS (Earth-to-space) in the 51.4-52.4 GHz band, limited to GSO FSS feeder links, shall ensure protection of existing services and systems in the considered and adjacent frequency bands and development of possible related regulatory measures, including revision of Resolution **750 (Rev. WRC-15)**.

**7. Issues for Consideration at Next APG Meeting**

APT Members are invited to follow the progress of ITU-R studies, and are encouraged to submit their contributions for further considerations in the next APG meeting.

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