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| **44 MEETING OF PERMANENT**  **CONSULTATIVE COMMITTEE II:**  **RADIOCOMMUNICATIONS**  **September 23 to 27, 2024**  **Merida, Mexico** | | | **CITEL/GT/CMR-27/doc. /24**  **August 30, 2024**  **Original: English** | |
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|  | **DRAFT PRELIMINARY VIEW FOR**  **WRC-27 AGENDA ITEM 1.3** | |  |
|  | **(Item on the Agenda: 3.1)** | |  |
|  | **(Document submitted by the Delegation of the United States)** | |  |

**SGT#: 1**

**Coordinator:**

**Vice-Coordinador:**

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**UNITED STATES OF AMERICA**

**DRAFT PRELIMINARY VIEWS FOR WRC-27**

**Agenda Item 1.3**: to consider studies relating to the use of the frequency band 51.4-52.4 GHz to enable use by gateway earth stations transmitting to non-geostationary-satellite orbit systems in the fixed-satellite service (Earth-to-space), in accordance with Resolution **130 (WRC‑23)**;​

**BACKGROUND**:

In accordance with Resolution **130 (WRC-23)**, WRC-27 agenda item 1.3 invites sharing and compatibility studies with existing services, including in adjacent bands, including protection of the fixed and mobile services, and studies relating to the suitability of revising conditions associated with the primary allocation to the FSS in the frequency band 51.4-52.4 GHz (Earth-to-space) to enable its use by gateway earth stations of non-GSO FSS systems (Earth-to- space), and the relevant regulatory studies.

Considering that satellite systems are increasingly being used to deliver broadband services, they play a crucial role in enabling universal broadband access. Next-generation fixed-satellite service (FSS) technologies are set to enhance broadband speeds significantly, with even faster rates expected shortly. Technological advancements, such as improvements in spot-beam technologies and frequency reuse, are being employed by the FSS in frequency bands above 30 GHz to optimize spectrum efficiency.

Furthermore, fixed-satellite applications in these higher frequency bands, such as feeder links, may be more compatible with other radiocommunication services compared to high-density FSS (HDFSS) applications. For that reason, a new allocation for GSO FSS earth stations in the frequency band 51.4-52.4 GHz were ultimately identified by WRC-19. However, the current frequency allocations to the FSS in the 51.4-52.4 GHz band do not support non-geostationary-satellite orbit (non-GSO) gateway, failing to meet the expected needs of these systems. Report ITU-R S.2461 identified spectrum needs for both GSO and non-GSO FSS earth stations in the frequency band 51.4-52.4 GHz.

The frequency band 51.4-52.4 GHz is allocated on a primary basis in the three Regions to the Fixed-Service and the Mobile Service and is available for high-density applications in the fixed service, as indicated in No. 5.547. The 52.6-54.25 GHz band is allocated to the EESS (passive) where No.**5.340** applies. Consideration needs to be given to revising Resolution 750 (Rev.WRC-19) to include the non-GSO FSS unwanted emission limit for the 52.6-54.25 GHz band and possibly modifying the GSO FSS unwanted emission limit for the same band, based on study results, considering the aggregation of interference into EESS (passive).

**U.S. VIEW**:

The United States supports studies and the development of a regulatory framework to enable use of the frequency band 51.4-52.4 GHz by NGSO FSS gateways (Earth-to-space) in accordance with Resolution **130** **(WRC-23),** while ensuring the protection of existing primary services, including terrestrial (Mobile and Fixed) services, GSO FSS in those frequency bands and EESS/SRS (passive) in the 52.6-54.25 GHz frequency band.

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