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| **39 MEETING OF PERMANENT**  **CONSULTATIVE COMMITTEE II:**  **RADIOCOMMUNICATIONS**  **April 25 to 29, 2022**  **Mexico City, Mexico** | | **OEA/Ser.L/XVII.7**  **CCP.II-RADIO /doc. /22**  **29 March 2022**  **Original: English** | |
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|  | **DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE Agenda Item 1.2** | |  |
|  | **(Item on the Agenda: 3.1)** | |  |
|  | **(Document submitted by the delegation of United States of America)** | |  |

**Impact on the sector:**

This document supports the CITEL PCCII WRC Working Group’s preparations for WRC-23.

**Executive Summary:**

This document contains a preliminary proposal from the United States for WRC-23 agenda item 1.2 addressing the 6 425-7 025 MHz and 7 025-7 125 MHz frequency bands.

**UNITED STATES OF AMERICA**

**DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Agenda Item 1.2**: *to consider identification of the frequency bands 3 300-3 400 MHz, 3 600‑3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution* ***245 (WRC‑19)****;*

# BACKGROUND

Mobile broadband plays a crucial role in providing access to businesses and consumers worldwide. In 2020, the first year of the pandemic, the number of Internet users grew by 10.2 per cent, the largest increase in a decade, driven by developing countries where Internet use went up 13.3 per cent. According to ITU estimates, the number of active mobile-cellular telephone subscriptions per 100 inhabitants continues to grow strongly, reaching 110 subscriptions per 100 inhabitants, including a record number of mobile subscriptions with broadband capacity (3G or better).[[1]](#footnote-1) Ninety-five percent of the world’s population lives within reach of a mobile broadband service, and the relatively small difference in the number of subscriptions between developed and developing countries demonstrates that connectivity is a priority among people in countries at all levels of development.[[2]](#footnote-2)

The demand for mobile wireless broadband applications such as IMT continues to grow dramatically as does the need for access to radio spectrum to support that growth.[[3]](#footnote-3) Fifth generation (5G) provides improved data rates and reduced latency. Importantly 5G has been designed to enable capabilities in a wide range of industries including healthcare, transportation, manufacturing, education, and telemedicine; 5G is expected to have a broad impact on our economies and societies. With demand for IMT applications continuing to increase, additional IMT spectrum identifications in the mid-range frequency bands – with its favourable mix of coverage and capacity - will need to be considered in order to enable future deployments, where these applications and services might be difficult to implement using lower or higher frequency bands.

6 425-7 025 MHz and 7 025-7 125 MHz

The 6 425 – 7 125 MHz band is already allocated to the mobile service on a primary basis. As a broadly defined service allocation,[[4]](#footnote-4) it affords administrations the flexibility to allow the use of various mobile systems and applications of the mobile service (e.g. electronic news gathering and other video relay and auxiliary services, IMT, RLAN) based on their national priorities and requirements.

The 6 425-7 125 MHz frequency range is allocated to the fixed satellite service (6 425-7 075 MHz), fixed and mobile services and portions of the band are used for Aeronautical Mobile Telemetry (AMT) in Region 2 (No. **5.457C**). Fixed services include microwave links of a critical nature deployed by public safety, utilities, rail and IMT backhaul for telecommunications operators. The space-to-Earth allocation to the fixed-satellite service in the band 6 700-7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service.

Regarding the Fixed Satellite Service (FSS) use of the band:

* 6 425-7 075 MHz: allocated globally to FSS.
  + 6 425-6 725 MHz: allocated to the FSS (Earth-to-space) in all Regions.
  + 6 725-7 025 MHz: allocated to the FSS (Earth-to-space) and subject to the provisions of Appendix **30B** (No. **5.441**). The FSS allotment in 6 725-7 025 MHz is particularly important to the developing countries.
  + 6 700-7 075 MHz: allocated to the FSS (space-to-Earth), limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under No. **9.11A** (No. **5.458B**).
* 7 025-7 075 MHz: Satellite Digital Audio Radio Services (SDARS) for GEO feeder links in the Earth-space direction to provide audio programming to subscribers in the United States, Canada, and the Caribbean.

In 2020, the United States made 1200 megahertz of spectrum available for unlicensed use in 5 925-7 125 MHz. This decision allows unlicensed devices (e.g., Wi-Fi 6E, LAA, NR-U) to share this spectrum with incumbent services under rules that are carefully crafted to protect the licensed services and to enable both unlicensed and licensed operations to continue to thrive throughout the band. A number of countries, including nine CITEL administrations, have already decided to allow license-exempt use of the frequency band 6 425-7 125 MHz and others are considering such use. Global regulatory harmonization would ensure economies of scope and scale to enable commercially viable unlicensed device 6 GHz ecosystem. Further, studying and considering identification of the 6 425-7 025 MHz frequencies for the terrestrial component of IMT for Region 2 and Region 3 is outside the scope of agenda item 1.2 and as such there will be no change in the Radio Regulations involving these frequencies with respect to these Regions. Accordingly, the United States proposes no change to the Radio Regulations for the bands 6 425– 7 125 MHz in order to support the flexible use of the mobile service allocation, including for RLAN use, and supports the further harmonization of the 6 GHz band for unlicensed devices.

**Proposal**:

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

NOC USA/1.2/6 GHz/1

5 570-6 700 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| … | | |
| 5 925-6 700 FIXED 5.457  FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B  MOBILE 5.457C  5.149 5.440 5.458 | | |

6 700- 7 250 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 6 700-7 075 FIXED  FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441  MOBILE  5.458 5.458A 5.458B | | |
| 7 075-7 145 FIXED  MOBILE  5.458 5.549 | | |
| … | | |

**Reasons**: No change to the Table of Frequency Allocations in the band 6 425 – 7 125 MHz in order to harmonize license-exempt use of the band. Regulatory harmonization will create economies of scope and scale and produce a robust equipment market, benefitting consumers and national economies worldwide. Given the existing mobile allocation, administrations may deploy and operate systems and applications of the mobile service (e.g. IMT or RLAN) based on their national priorities and requirements.

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1. https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf [↑](#footnote-ref-1)
2. https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf [↑](#footnote-ref-2)
3. Ericsson predicts that total mobile traffic is expected to increase by a factor of five over the next six years, reaching 164 exabytes per month by the end of 2025. Ericsson reports that today, smartphones generate about 95% of total mobile data traffic, and that by 2025, 5G networks will carry about half of the world’s mobile data traffic. *See* Ericsson, Mobility Report at 20 (2020), https://www.ericsson.com/49da93/assets/local/mobility-report/documents/2020/june2020-ericsson-mobility-report.pdf. Cisco estimates that, by 2022, 22% of global internet traffic will come from mobile networks, up from 12% in 2017. *See* Cisco Systems Inc., Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2017-2022 White Paper (2019), https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-738429.html. [↑](#footnote-ref-3)
4. See Rec. ITU-R SM.1133, “Spectrum utilization of broadly defined services.” [↑](#footnote-ref-4)