**UNITED STATES OF AMERICA**

DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

**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 (WRC-15)**

**Background Information:**

Mobile broadband plays an increasingly crucial role in providing access to businesses and consumers worldwide. According to International Telecommunications Union (ITU) statistics, “Mobile-broadband subscriptions have grown more than 20% annually in the last five years and are expected to reach 4.3 billion globally by end 2017.” while “Mobile-broadband prices as a percentage of GNI per capita halved between 2013 and 2016 worldwide.[[1]](#footnote-1) Incredible technological innovation has enabled the use of higher frequency bands (e.g. mmWave) to help meet the ever-increasing demand for mobile broadband.

The 47.2-50.2 GHz frequency range is shared on a co-primary basis between the Fixed, Fixed Satellite and Mobile Services in all three Regions. The Fixed Service allocation includes a global identification for high-altitude platform stations (“HAPS”) at 47.2-47.5 GHz paired with 47.9-48.2 GHz (No. **5.552A**). As part of the preparations for WRC-19 agenda item 1.13, ITU-R carried out extensive sharing and compatibility studies between IMT and the Fixed Satellite Service: these studies show that sharing between the terrestrial component of IMT and the Fixed Satellite Service is feasible with a large interference margin in the 47.2-50.2 GHz frequency range. The ITU-R Working Party 5C is studying sharing and compatibility of broadband HAPS with IMT for deployment of HAPS in this band with greater rain fade mitigation.

The harmonization of spectrum for mobile broadband provide benefits to consumers and businesses through economies of scale and global roaming. However, Administrations may be unable to make spectrum available in the exact same frequency bands due to different existing uses and priorities. Therefore, in order to achieve the benefits of harmonization while allowing regulators the flexibility to assign spectrum within this range for domestic use as appropriate, an identification for IMT is proposed in the 47.2-50.2 GHz frequency range. A global identification for IMT in 47.2-50.2 GHz would allow each country/region to assign spectrum for IMT consistent with their domestic use and priorities, while still facilitating the benefits of economies of scale for businesses and consumers.

Finally, there is no need for a WRC Resolution specifying technical and operational constraints on IMT to be associated with this proposed identification for IMT. Operational characteristics that are used by cellular providers, such as base station downtilt, that change on time scales needed to minimize intra- and inter-cell interference and also guarantee quality of service should not be encoded in the Radio Regulations. Similarly, with regards to the use of the band by high density applications in the FSS (No. **5.561B**), no condition is required to achieve a balance of spectrum between FSS and IMT since this is a national matter and hence should not be included in any WRC Resolution. With regards to protection of passive services in the adjacent band 50.2-50.4 GHz included in No. **5.340**, no changes to Resolution 750 are necessary since No. **5.340.1** clearly states that “The allocation to the Earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2-50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands.”

# Proposals:

ARTICLE 5

**Frequency allocations**

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

**MOD USA/1.13/1**

**40-47.5 GHz**

|  |  |  |
| --- | --- | --- |
| **Allocation to services** | | |
| Region 1 | Region 2 | Region 3 |
| 47.2-47.5 FIXED  FIXED-SATELLITE (Earth-to-space) 5.552  MOBILE ADD 5.H113  5.552A | | |

**47.5-51.4 GHz**

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 47.5-47.9  FIXED  FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A  MOBILE ADD 5.H113 | 47.5-47.9  FIXED  FIXED-SATELLITE (Earth-to-space) 5.552  MOBILE ADD 5.H113 | |
| 47.9-48.2 FIXED  FIXED-SATELLITE (Earth-to-space) 5.552  MOBILE ADD 5.H113  5.552A | | |
| 48.2-48.54  FIXED  FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A 5.555B  MOBILE ADD 5.H113 | 48.2-50.2  FIXED  FIXED-SATELLITE (Earth-to-space) 5.516B 5.338A 5.552  MOBILE ADD 5.H113 | |
| 48.54-49.44  FIXED  FIXED-SATELLITE (Earth-to-space) 5.552  MOBILE ADD 5.H113  5.149 5.340 5.555 |  | |
| 49.44-50.2  FIXED  FIXED-SATELLITE (Earth-to-space) 5.338A 5.552 (space-to-Earth) 5.516B 5.554A 5.555B  MOBILE ADD 5.H113 | 5.149 5.340 5.555 | |

Reasons: As studies show sharing with other services operating in 47.2-50.2 GHz is feasible, these modifications provide an identification for IMT in the frequency range 47.2 to 50.2 GHz. This facilitates harmonized worldwide bands for IMT, which are highly desirable in order to achieve global roaming and the benefits of economies of scale.

**ADD USA/1.13/2**

**5.H113** The frequency band 47.2-50.2 GHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which they are allocated and does not establish priority in the Radio Regulations.

**Reasons**: Harmonized worldwide bands for IMT enable global roaming and the benefits of economies of scale as the same user equipment can be used to serve the global market.

1. ICT Facts and Figures 2017, p 4 and 5. See: https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf [↑](#footnote-ref-1)