

PLENARY MEETING

**Addendum 6 to
Document 6168(Add.13)-
E
29 August 2019
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Member States of the Inter-American Telecommunication Commission (CITEL)

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 1.13

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)**;

Part 6 – Frequency bands 71-76 GHz and 81-86 GHz

BACKGROUND

Resolution **238 (WRC-15)** calls for studies to determine the spectrum needs for the terrestrial component of IMT in the frequency range between 24.25 GHz and 86 GHz, as well as sharing and compatibility studies, taking into account the protection of services to which the frequency band is allocated on a primary basis, for the frequency bands:

– 24.25-27.5 GHz, 37-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz, which have allocations to the mobile service on a primary basis; and

– 31.8-33.4 GHz, 40.5-42.5 GHz and 47-47.2 GHz, which may require additional allocations to the mobile service on a primary basis.

The 71-76 GHz frequency band, or part of it, is allocated in the RR to the Broadcasting Service, Broadcasting-Satellite Service, Fixed Service, Fixed-Satellite Service (space-to-Earth), Mobile Service and Mobile-Satellite Service (space-to-Earth) on a primary basis and to Space Research (space-to-Earth) on a secondary basis.

The 81-86 GHz frequency band, or part of it, is allocated in the RR to the Fixed Service, Fixed-Satellite Service (Earth-to-space), Mobile Service and Mobile-Satellite Service (Earth-to-space), Radio Astronomy on a primary basis and Space Research (space-to-Earth) on a secondary basis.

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

The rising demand for mobile broadband has created increased capacity requirements in the backhaul or transport network. The 71–76 GHz and 81–86 GHz frequency ranges are important for the provision of Fixed Service (FS) backhaul for mobile broadband services. These frequency ranges offer very wide bandwidth, enabling capacities on the order of 10 Gigabit per second or more over distances of a few kilometers and represent an alternative to fiber deployment: this data rate cannot be achieved in other frequency bands that are bandwidth-limited. It is expected that the demand for high-capacity backhaul will create momentum for the transition from lower bands to these frequency ranges. Point-to-point microwave radios used by FS are a key component in many mobile networks, as well as Fixed Service microwave links for various uses including broadcast, utilities and public safety. The 71-76 GHz and 81-86 GHz frequency ranges are expected to experience major growth in Fixed Service use and represent up to 20 percent of new backhaul deployments annually by 2020².

In order to provide important backhaul services including those, which support IMT-2020 deployments, no changes are proposed for the 71-76 GHz and 81-86 GHz frequency ranges.

In addition, no change to these bands would facilitate compatibility with adjacent band services, in particular with automotive radars in the band 76-81 GHz.

¹ ICT Facts and Figures 2017, p 4 and 5. See: <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf>

² <https://docs.fcc.gov/public/attachments/FCC-17-152A1.pdf>

ARTICLE 5

Frequency allocations

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

NOC **IAP/6168A13A6/1**

66-81 GHz

Allocation to services		
Region 1	Region 2	Region 3
71-74	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)	
74-76	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561	

Reasons: No change in the 71-76 GHz frequency range provides for increasing use of these bands for backhaul and other fixed uses in support of IMT-2020. Also facilitates compatibility with automotive radars in the adjacent 76-81 GHz band.

NOC **IAP/6168A13A6/2**

81-86 GHz

Allocation to services		
Region 1	Region 2	Region 3
81-84	FIXED 5.338A FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A	
84-86	FIXED 5.338A FIXED-SATELLITE (Earth-to-space) 5.561B MOBILE RADIO ASTRONOMY 5.149	

Reasons: No change to the 81-86 GHz frequency range provides for increasing use of these bands for backhaul and other fixed uses in support of IMT-2020. Also facilitates compatibility with automotive radars in the adjacent 76-81 GHz band.