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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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| COMMITTEE 4 | **Document 242-E** |
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| Barbados/Mexico | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | |
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| Agenda item 1.1 | |

1.1 to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution **233 (WRC‑12)**;

Introduction

In past meetings of Working Group 4C1 of the World Radiocommunication Conference, a variety of proposals and discussions have come forward concerning the allocation of different frequency bands for IMT systems.

The Mexican Administration reiterates its position on not identifying the frequency band 3 400‑4 200 MHz for IMT systems, and accordingly proposes that there be no change in the Table of Frequency Allocations. The aim of this proposal is to reflect the current situation in the Region.

General considerations

In the past four decades, C‑band systems have proven more reliable as a telecommunication back‑up because of their ability to withstand rains, the ease and speed with which they can be set up, and their low cost. These points take on special importance in countries that are particularly vulnerable to heavy rains, seismic events and volcanic eruptions, as in Central America and the Caribbean. At present, C‑band systems are irreplaceable in natural disasters for supporting rescue missions and protecting the civilian population in disaster zones.

In some Region 2 countries, the band 3 400‑4 200 MHz is being used for essential government services for the benefit of the general public (meteorology, civil aviation, public safety, etc.) as well as for private-sector commercial services (DTH, over-the-air channels, mobile systems backhaul, etc.)

ITU studies agree that, in the current state of the technology, it is not possible to make the use of fixed-satellite service compatible with the introduction of IMT systems in the band 3 400‑4 200 MHz. According to ITU‑R report M.2109, the same technical difficulties would apply to the band 4 500‑4 800 MHz (space-to-Earth), allocated to the fixed-satellite service by Appendix **30B**, whose purpose is to guarantee equitable access for all countries to the geostationary orbit for use at any time and in any place.

Several administrations, not only in Region 2 but also in Regions 1 and 3, as well as international agencies such as ICAO, have reported an increase in cases of harmful interference to VSAT networks dedicated to civil air navigation and meteorology, which could put at risk the safety of passengers and civilian air transport in general.

At this time, there is a wide range of systems deployed in a number of countries that provide critical communication satellite services using C‑band frequencies (3 400‑4 200 MHz and 5 850‑6 700 MHz), which need to be taken into account to ensure that they can be operated free of harmful interference.

Interference-free operation of satellite communications using the C‑band is fundamental because that band offers a great many advantages over other frequency bands also commonly used by satellites, such as the Ku‑band and Ka‑band. The characteristics of C‑band propagation facilitate obtaining broad coverage making it possible to connect large regions or continents using the same footprint. Also, as mentioned above, this frequency band is very robust, withstanding signal degradation due to rain, for, whereas rains can on occasion degrade signals for services using higher frequency bands, services provided on the C‑band remain highly reliable even during periods of heavy precipitation.

At the same time, satellite services in this band currently coexist with other radiocommunication services without any serious difficulties. This is due to the technical and operational characteristics of such services, but those characteristics are nevertheless distinct from those of IMT. The results of the technical studies undertaken by ITU are not conclusive on this matter, and have shown that there are certain difficulties as regards enabling IMT systems to coexist with satellite services.

Specific considerations

1 For the administrations signatory to this proposal, the use of the C-band is very important for carrying services via satellite systems, and there are a number of good reasons for maintaining the NOC position.

2 In the specific case of Mexico, an allocation has been made to the Mexican satellite system MEXSAT for operation of the segment 3 400‑3 700 MHz (space-to-Earth) by the bicentennial satellite, which was successfully launched in December 2012 at orbital position 114.9 °W and currently provides national security and government communications services; these include the “México Conectado” programme and other important programmes for social coverage of the national territory including the Exclusive Economic Zone.

3 The administrations signatory to this proposal, in their capacity as notifying administrations for various satellite networks in operation and as authorities licensing foreign satellite operators to provide services in their territories, share a vision of protecting satellite services for the benefit of the general public, especially those services that are an essential element in achieving the connectivity plans which the Government has shaped at the constitutional level and is putting into practice.

ARTICLE 5

Frequency allocations

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

NOC BRB/MEX/242/1

2 700-4 800 MHz

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| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 3 400-3 600  FIXED  FIXED-SATELLITE (space-to-Earth)  Mobile 5.430A  Radiolocation  5.431 | 3 400-3 500  FIXED  FIXED-SATELLITE (space-to-Earth)  Amateur  Mobile 5.431A  Radiolocation 5.433  5.282 | 3 400-3 500  FIXED  FIXED-SATELLITE (space-to-Earth)  Amateur  Mobile 5.432B  Radiolocation 5.433  5.282 5.432 5.432A |
| 3 500-3 700  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile  Radiolocation 5.433 | 3 500-3 600  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile 5.433A  Radiolocation 5.433 |
| 3 600-4 200  FIXED  FIXED-SATELLITE (space-to-Earth)  Mobile | 3 600-3 700  FIXED  FIXED-SATELLITE (space-to-Earth)  MOBILE except aeronautical mobile  Radiolocation  5.435 |
|  | 3 700-4 200  FIXED  FIXED-SATELLITE (space to-Earth)  MOBILE except aeronautical mobile | |

**Reasons**: Identifying frequency band 3 400-4 200 MHz for IMT systems could cause harmful interference and affect continuity and quality of service of satellite services in the countries of Region 2 that use this service.

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