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| **World Radiocommunication Conference (WRC-19) Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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| PLENARY MEETING | **Addendum 22 to Document 57-E** |
|  | **4 October 2019** |
|  | **Original: English** |
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| Brazil (Federative Republic of) | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 9.1 | |

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:

9.1 on the activities of the Radiocommunication Sector since WRC-15;

**5.441B** to review No. **5.441B** of the Radio Regulations taking into account the ITU-R studies on the use of IMT in the frequency band 4 800-4 990 MHz to ensure protection of the aeronautical mobile service.

Introduction

In accordance with Resolution **223 (Rev. WRC-15)** and No. **5.441B** of thee Radio Regulations (RR), WRC-19 should consider the results of studies ITU-R of the technical and regulatory conditions for the use of IMT in the frequency band 4 800-4 990 MHz in order to protect the aeronautical mobile service and to review the criterion specified in RR No. **5.441B**.

Following consideration of this issue at CPM19-2 it was recognized that “this criterion is subject to review at WRC-19” according to RR No. **5.441B**. Administrations were also urged to consider this issue, if they deem appropriate, in preparation for WRC-19.

The Brazilian Administration is considering the issue, believing that it is required to maintain the application of RR No. **9.21** in RR No. **5.441B** for stations of IMT to protect stations of aeronautical mobile service (AMS) and fixed service (FS). For that, it is proposed to delete the pfd level from RR No. **5.441B**, which is not needed to protect AMS and unreasonably cause constrains to the use of IMT in the frequency band 4 800-4 990 MHz.

Brazil also considers that it is necessary to clarify the conditions to receive protection against possible interference from AMS stations when they are outside the national airspace in the frequency band 4 800-4 990 MHz by adding a new footnote to RR Article **5**. This new footnote specifies that the AMS can use parts of the band 4800-4990 MHz without prior agreement of any administration only under the condition that the distance from AMS station to the coast at the lower water level doesn’t exceeds a predetermined minimum value.

Proposal

It is proposed to amend footnote RR No. **5.441B** and develop a new footnote as shown in the Annex. In addition, changes to the table of frequency allocations and Resolution **223 (Rev.WRC‑15)** are also being proposed.

ARTICLE 5

Frequency allocations

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

MOD B/57A22/1

4 800-5 250 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 4 800-4 990 FIXED  MOBILE 5.440A 5.441A MOD 5.441B 5.442  Radio astronomy  5.149 5.339 5.443 | | |
| ... | | |

MOD B/57A22/2

5.441B In Cambodia, Lao P.D.R., Brazil, [list of countries] and Viet Nam, the frequency band 4 800-4 990 MHz, or portions thereof, 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 it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. **9.21** from the countries using receiving stations on board of aircrafts in the4 800-4 825 MHz and 4 835-4 950 MHz and/or stations in fixed service in the frequency band 4800-4990 MHz in accordance to Resolution **223 (Rev.WRC-19)**. See also Resolution **416 (WRC-07)**.     (WRC‑19)

**Reasons:** According to ITU-R documents the 4 800-4 990 MHz band can be used by the aeronautical mobile telemetry systems described in Report ITU-R M.2286 and airborne data links specified in Recommendation ITU-R M.2116. Regarding footnote RR No. **5.442**, the frequency band 4 825-4 835 MHz cannot be used by aeronautical mobile service stations, except in some countries of Region 2 and Australia, where the band 4 825-4 835 MHz may be used only for aeronautical telemetry in flight testing. Additionally, the frequency band 4 950-4 990 MHz is not allocated to aeronautical mobile service at all.

Resolution **416 (WRC-07)** restricts the use of aeronautical mobile telemetry only to transmissions from aircraft stations and, accordingly, the use of the pfd limit is not required since it is applied to protect receivers of aeronautical mobile telemetry stations located on the ground. According to Resolution **416 (WRC-07)** in the 4 400-4 940 MHz band, bilateral coordination of transmitting aeronautical mobile telemetry aircraft stations with respect to receiving fixed or mobile stations must be done if the aeronautical mobile telemetry aircraft station will operate within 450 km of the receiving fixed or mobile stations of another administration. Furthermore, in accordance with footnote RR No. **5.440A**, any use of aeronautical mobile telemetry does not preclude the use of this band by other mobile service applications or by other services to which this band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Therefore, the application of RR No. **9.21** to stations of the aeronautical mobile telemetry in the band 4 400-4 940 MHz is incorrect.

In accordance with Recommendation ITU-R M.2116 the use of airborne data links in the band 4 800-4 990 MHz is limited to national territories and thus the limit of the pfd, is redundant, and protection of AMS stations is fully guaranteed by the application of RR No. **9.21**. Moreover, the application of RR No. **9.21** remains relevant only for the receiving stations on board aircrafts, since this are AMS stations, where protection may be required. By analogy, protecting the receivers of airborne data link systems fixed stations with aeronautical mobile telemetry applications is not required.

Additionally, it is proposed to obtain consent under RR No. **9.21** from countries using fixed service stations. This measure is aimed at ensuring the protection of such stations used in some countries.

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