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| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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| PLENARY MEETING | | **Addendum 6 to Document 65(Add.24)-E** | |
|  | | **31 October 2023** | |
|  | | **Original: English** | |
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| European Common Proposals | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
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| 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 ITU Convention;

9.1 on the activities of the ITU Radiocommunication Sector since WRC‑19:

Part 6: Matters raised by WRC-19 Document 550, including RR No. 21.5

If WRC‑23 addresses contributions in response to WRC‑19 Document 550 under WRC‑23 agenda item 9.2 (due to its inclusion in section 4.3.2 of Part 1 of the Director’s Report), then this proposal should be considered there.

Introduction

The following text set out in the Annex to [WRC‑19 Document 550](https://www.itu.int/md/R16-WRC19-C-0550/en) was approved and included in the minutes of the meeting as a decision of the Conference ([WRC‑19 Document 573](https://www.itu.int/md/R16-WRC19-C-0573/en)):

“ITU‑R is invited to study, as a matter of urgency, the applicability of the limit specified in No. **21.5** of the Radio Regulations to IMT stations that use an antenna that consists of an array of active elements, with a view to recommend ways for its possible replacement or revision for such stations, as well as any necessary updates to Table **21-2** related to terrestrial and space services sharing frequency bands.

Furthermore, the ITU‑R is invited to study, as a matter of urgency, verification of RR No. **21.5** regarding the notification of IMT stations that use an antenna that consists of an array of active elements, as appropriate.”

In accordance with the results of CPM23‑1 (Administrative Circular [CA/251](https://www.itu.int/md/R00-CA-CIR-0251/en)), Working Party 5D (WP 5D) was appointed as the responsible group in ITU‑R to perform the requested studies and was requested to report the results of the studies to the Director of the Radiocommunication Bureau to be considered as the Director deems appropriate.

For conducting this work, the Chairmen of Study Group (SG) 4 and SG 5 gave guidance in Document [5D/407](https://www.itu.int/md/R19-WP5D-C-0407/en) that any proposed solution should not impact the protection of satellite services.

During the studies in response to WRC‑19 Document 550, CEPT supported a short-term solution, until a more refined solution is agreed at a WRC to verify RR No. **21.5** in the notification of stations in the mobile service, including IMT stations, and the fixed service that use an array of active elements. This solution was that:

“For the purpose of verification of RR No. **21.5** in the notification of stations in the mobile service, including IMT stations, and the fixed service that use an array of active elements in the frequency range 24.45-29.5 GHz, the notification field 8AA (“power delivered by a transmitter to the antenna of a station” ) in RR No. **21.5** should be considered as the “total radiated power” (TRP), which is defined as the integral of the power transmitted from all antenna elements in different directions over the entire radiation sphere (noting it is mathematically equivalent to the sum of conducted powers from all internal transmitters, minus ohmic losses). The limit 8AA <= 10 dBW for notification of base stations that use an array of active elements would remain unchanged. The following other fields would have to be documented in every notification:

– 9G = maximum gain of the AAS

– 8B = 8AA + 9G

– 7AB = necessary bandwidth of the IMT transmission (currently 50, 100, 200 or 400 MHz)”.

This solution could not be implemented with a Rule of Procedure before WRC‑23 due to the absence of consensus within ITU‑R. Consequently, this European Common Proposal is addressing the matter of stations in the mobile service, including IMT stations, and the fixed service that use an array of active elements in the frequency range 24.45-29.5 GHz by implementing this solution through a new provision RR No. **21.5B**. In addition, CEPT proposes to merge entries in RR Table **21-2** for the frequency band 24.45-29.5 GHz.

Proposals

ARTICLE 21

Terrestrial and space services sharing frequency bands above 1 GHz

Section II − Power limits for terrestrial stations

ADD EUR/65A24A6/1

21.5B For stations in the mobile service, including IMT stations, and the fixed service that use an antenna that consists of an array of active elements and transmit in the frequency range 24.45-29.5 GHz, “The power delivered by a transmitter to the antenna of a station” in No. **21.5** shall be interpreted as the “total radiated power” (TRP), which is defined as the integral of the power transmitted from all antenna elements in different directions over the entire radiation sphere.     (WRC‑23)

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21.6 4) The limits given in Nos. **21.2**, **21.3**, **21.4**, **21.5**, **21.5A** and **21.5B** apply, where applicable, to the services and frequency bands indicated in Table **21-2** for reception by space stations where the frequency bands are shared with equal rights with the fixed or mobile services:     (WRC‑23)

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TABLE **21-2**     (Rev.WRC‑23)

|  |  |  |
| --- | --- | --- |
| Frequency band | Service | Limit as specified in Nos. |
| … | … | … |
| 17.7-18.4 GHz 18.6-18.8 GHz 19.3-19.7 GHz 22.55-23.55 GHz 24.45--29.5 GHz | Fixed-satellite Earth exploration-satellite Space research Inter-satellite | 21.2,21.3,21.5,21.5A and21.5B |

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