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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 9 to Document 16(Add.22)-E** |
|  | **7 October 2019** |
|  | **Original: English** |
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| European Common Proposals | |
| Proposals for the work of the Conference | |
|  | |
| Agenda item 9.2 | |

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

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations[[1]](#footnote-1)\*; and

Part 9 – Section 3.2.4.8 of the Report of the BR Director

Introduction

This Addendum presents the European Common Proposal with respect to Section 3.2.4.8 of the Report of the Director of the Radiocommunication Bureau under WRC-19 agenda item 9.2. The Section 3.2.4.8 deals with the inconsistency of Section 6 of Annex 1 to RR Appendix **30** with respect to other protection criteria of Annexes 1 and 4 to RR Appendix **30**.

Section 6 of Annex 1 to RR Appendix **30** specifies that an FSS administration is considered as not being affected if the proposed new or modified frequency assignment in the Regions 1 and 3 List, or if a proposed modification to the Region 2 Plan, gives a power flux-density (pfd) anywhere over any portion of the service area of its overlapping frequency assignments in the fixed-satellite service in Region 1, 2 or 3 of less than the applicable power flux-density values. Such specification of the protection criteria is different than the specification for protection criteria in other Sections of Annex 1 to RR Appendix **30**, as well as in Annex 4 to RR Appendix **30**.

In all other Sections of Annex 1 to RR Appendix **30**, as well as in Annex 4 to RR Appendix **30**, the appropriate protection criteria is specified in a way that an administration is considered as being affected if the applicable limits are exceeded.

In addition to that, when applying the protection criteria in Section 6 of Annex 1 to RR Appendix **30**, the Bureau considers an FSS administration as being affected if the applicable power flux-density value is exceeded.

Therefore, there is a need to align the wording of Section 6 of Annex 1 to RR Appendix **30** with the corresponding wording in other Sections of the same Annex, as well as with the wording of Annex 4 to RR Appendix **30** which deals with opposite case of coordination, namely, the coordination of a transmitting space station in the fixed-satellite service (FSS) (space-to-Earth) with respect to frequency assignments in the broadcasting-satellite service covered by RR Appendix **30**.

Proposals

APPENDIX 30 (REV.WRC‑15)[[2]](#footnote-2)\*

Provisions for all services and associated Plans and List[[3]](#footnote-3)1 for  
the broadcasting-satellite service in the frequency bands  
11.7-12.2 GHz (in Region 3), 11.7-12.5 GHz (in Region 1)  
         and 12.2-12.7 GHz (in Region 2)    (WRC‑03)

ANNEX 1     (REV.WRC‑15)

Limits for determining whether a service of an administration is affected  
by a proposed modification to the Region 2 Plan or by a proposed  
new or modified assignment in the Regions 1 and 3 List  
or when it is necessary under this Appendix to seek  
the agreement of any other administration[[4]](#footnote-4)25

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# 6 Limits to the change in the power flux-density of assignments in the Regions 1 and 3 Plan or List to protect the fixed-satellite service (space-to‑Earth) in the frequency band 11.7-12.2 GHz[[5]](#footnote-5)32 in Region 2 or in the frequency band 12.2-12.5 GHz in Region 3, and of assignments in the Region 2 Plan to protect the fixed-satellite service (space-to-Earth) in the frequency band 12.5-12.7 GHz in Region 1 and in the frequency band 12.2-12.7 GHz in Region 3

With respect to § 4.1.1 *e)* of Article 4, an administration is considered as being affected if the proposed new or modified assignment in the Regions 1 and 3 List would result in an increase in the power flux-density over any portion of the service area of its overlapping frequency assignments in the fixed-satellite service in Region 2 or Region 3 by more than 0.25 dB above that resulting from the frequency assignments in the Plan or List for Regions 1 and 3 as established by WRC‑2000.

With respect to § 4.2.3 *e)*, an administration is considered as being affected if the proposed modification to the Region 2 Plan would result in an increase in the power flux-density over any portion of the service area of its overlapping frequency assignments in the fixed-satellite service in Region 1 or 3 by more than 0.25 dB above that resulting from the frequency assignments in the Region 2 Plan at the time of entry into force of the Final Acts of the 1985 Conference.

With respect to § 4.1.1 *e)* or 4.2.3 *e)* of Article 4, with the exception of cases covered by Note 1 below, an administration is considered as not being affected if the proposed new or modified assignment in the Regions 1 and 3 List, or if a proposed modification to the Region 2 Plan, gives a power flux-density anywhere over any portion of the service area of its overlapping frequency assignments in the fixed-satellite service in Region 1, 2 or 3 of less than or equal to:

−186.5    dB(W/(m2 · 40 kHz)) for 0° ≤ θ < 0.054°

−164.0 + 17.74 log θ    dB(W/(m2 · 40 kHz)) for 0.054° ≤ θ < 2.0°

−165.0 + 1.66 θ2    dB(W/(m2 · 40 kHz)) for 2.0° ≤ θ < 3.59°

−157.5 + 25 log θ    dB(W/(m2 · 40 kHz)) for 3.59° ≤ θ < 10.57°

−131.9    dB(W/(m2 · 40 kHz)) for 10.57° ≤ θ

where θ is the minimum geocentric orbital separation in degrees between the wanted and interfering space stations, taking into account the respective East-West station-keeping accuracies.

NOTE 1 – With respect to § 4.1.1 *e)* of Article 4, an administration in Region 3 is considered as not being affected if the proposed new or modified assignment in the Regions 1 and 3 List in the orbital arc 105° E‑129° E gives a power flux-density anywhere over any portion of the territory of the notifying administration within the service area of its overlapping frequency assignments in the fixed-satellite service in the orbital arc 110° E-124° E of less than or equal to:

−186.5    dB(W/(m2 · 40 kHz)) for 0° ≤ θ < 0.054°

−164.0 + 17.74 log θ    dB(W/(m2 · 40 kHz)) for 0.054° ≤ θ < 1.8°

−162.3 + 0.89 θ2    dB(W/(m2 · 40 kHz)) for 1.8° ≤ θ < 5.0°

−157.5 + 25 log θ    dB(W/(m2 · 40 kHz)) for 5.0° ≤ θ < 10.57°

−131.9    dB(W/(m2 · 40 kHz)) for 10.57° ≤ θ

where θ is the minimum geocentric orbital separation in degrees between the wanted and interfering space stations, taking into account the respective East-West station-keeping accuracies.

The above set of formulas is only applied to networks:

– for which Appendix **4** information for coordination had been received by the Bureau prior to 30 March 2002; *and*

– which had been brought into use prior to 30 March 2002 and for which the date of bringing into use had been confirmed to the Bureau; *and*

– for which the complete due diligence information, in accordance with Annex 2 to Resolution **49 (Rev.WRC‑15)**, had been received by the Bureau prior to 30 March 2002.     (WRC‑19)

**Reasons:** There is a need to align the wording of Section 6 of Annex 1 to RR Appendix **30** with the corresponding wording in other Sections of the same Annex, as well as the wording in Section 4 to RR Appendix **30**, in order to correct the inconsistency of specifying when the applicable limits are triggered.

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1. \* This agenda item is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the Radio Regulations and the comments from administrations. [↑](#footnote-ref-1)
2. \* The expression “frequency assignment to a space station”, wherever it appears in this Appendix, shall be understood to refer to a frequency assignment associated with a given orbital position. See also Annex 7 for the orbital limitations.     (WRC‑2000) [↑](#footnote-ref-2)
3. 1 The Regions 1 and 3 List of additional uses is annexed to the Master International Frequency Register (see Resolution **542 (WRC‑2000)**\*\*).     (WRC‑03)

   \*\* *Note by the Secretariat*: This Resolution was abrogated by WRC‑03.

   *Note by the Secretariat*: Reference to an Article with the number in roman is referring to an Article in this Appendix. [↑](#footnote-ref-3)
4. 25 With respect to this Annex, except for Section 2, the limits relate to the power flux‑density which would be obtained assuming free-space propagation conditions.

   With respect to Section 2 of this Annex, the limit specified relates to the overall equivalent protection margin calculated in accordance with § 2.2.4 of Annex 5. [↑](#footnote-ref-4)
5. 32 Including assignments operating under No. **5.485**. [↑](#footnote-ref-5)