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| **41 MEETING OF PERMANENT**  **CONSULTATIVE COMMITTEE II:**  **RADIOCOMMUNICATIONS**  **May 22 to 26, 2023**  **Mexico City, Mexico** | | **OEA/Ser.L/XVII.4.2.41**  **CCP.II-RADIO /doc. /23**  **01 May 2023**  **Original: English** | |
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|  | **PROPOSALS FOR THE WORK OF THE CONFERENCE**  **AGENDA ITEM 7 Topic D2** | |  |
|  | **(Item on the Agenda: 3.1 (SGT-4))** | |  |
|  | **(Document submitted by the administration of the United States)** | |  |

**Impact on the sector:**

This document supports the work of CITEL’s PCC.II Working Group for WRC under 3.1 of the agenda.

**Executive Summary:**

This contribution is a preliminary proposal in relation to WRC-23 agenda item 7 Topic D2 to address modification of RR Appendix **4** data items to support implementation of agreed revisions to Recommendation ITU-R S.1503-3. The ITU-R discussions on revisions to Recommendation ITU-R S.1503-3 will continue at the July 2023 meeting of ITU-R Working Party 4A. The discussions in Working Party 4A could lead to additions or deletion to the Appendix **4** data items reflected in the proposal below.

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| |  | | --- | | United States of America | | **proposals for the work of the Conference**  **Agenda item 7:** *to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution****86******(Rev.WRC‑07)****, in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;*  7(D2) Topic D2 – New RR Appendix 4 parameters for Recommendation ITU-R S.1503 updates  **Background Information**: WRC-23 agenda item 7 Topic D2 addresses modification of RR Appendix **4** data items to support implementation of agreed revisions to Recommendation ITU-R S.1503-3.  ITU-R has been working on changes to Recommendation ITU-R S.1503-3 titled “Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite service systems or networks with limits contained in Article **22** of the Radio Regulations.” Some of the agreed changes require additional or modified RR Appendix **4** data items in order to be implemented in practice. Therefore, it was proposed to develop draft CPM text to cover these changes, assuming a revision to Recommendation ITU‑R S.1503-3 is adopted by Study Group 4.  *Note: ITU-R discussions on revisions to Recommendation ITU-R S.1503-3 will continue at the July 2023 meeting of ITU-R Working Party 4A. There have been no agreements on which elements will be submitted to SG4 as part of updates to Recommendation ITU-R S.1503-3. These discussions could lead to additions or deletion to the Appendix* ***4*** *data items included in the proposal below.*  **Proposal**: | |  | |
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APPENDIX 4 (REV.WRC‑19)

Consolidated list and tables of characteristics for use in the  
application of the procedures of Chapter III

ANNEX 2

Characteristics of satellite networks, earth stations  
or radio astronomy stations[[1]](#footnote-1)2    (Rev.WRC‑12)

Footnotes to Tables A, B, C and D

MOD USA/7D2/1

**TABLE A**

GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK OR SYSTEM,  
EARTH STATION OR RADIO ASTRONOMY STATION     (Rev.WRC‑23)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Items in Appendix** | ***A \_ GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK OR SYSTEM, EARTH STATION OR RADIO ASTRONOMY STATION*** | **Advance publication of a geostationary- satellite network** | **Advance publication of a non-geostationary-satellite network or system subject to coordination under Section II  of Article 9** | **Advance publication of a non-geostationary-satellite network or system not subject to coordination under Section II  of Article 9** | **Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)** | **Notification or coordination of a non-geostationary-satellite network or system** | **Notification or coordination of an earth station (including notification under  Appendices 30A or 30B)** | **Notice for a satellite network in the broadcasting-satellite service under  Appendix 30 (Articles 4 and 5)** | **Notice for a satellite network  (feeder-link) under Appendix 30A  (Articles 4 and 5)** | **Notice for a satellite network in the fixed- satellite service under Appendix 30B  (Articles 6 and 8)** | **Items in Appendix** | **Radio astronomy** |
| … | … | … | … | … | … | … | … | … | … | … | … | … |
| **A.14** | **FOR STATIONS OPERATING IN A FREQUENCY BAND SUBJECT TO Nos. 22.5C, 22.5D, 22.5F OR 22.5L: SPECTRUM MASKS** |  | | | | | | | | | **A.14** |  |
| … | … | … | … | … | … | … | … | … | … | … | … | … |
| A.14.b.6 | the mask pattern defined in terms of the power in the reference bandwidth as a function of latitude and the off-axis angle between the non-geostationary earth station boresight line and the line from the non-geostationary earth station to a point on the GSO arc or as a function of latitude, the non-geostationary earth station pointing angles (azimuth, elevation) and the difference in longitude between the non-geostationary earth station and a point on the geostationary arc |  |  |  |  | **X** |  |  |  |  | A.14.b.6 |  |
| … | … | … | … | … | … | … | … | … | … | … | … | … |
| A.14.c.4 | the type of mask, among one of the following types: (Earth-based exclusion zone angle, difference in longitude, latitude) or (satellite azimuth, satellite elevation, latitude) |  |  |  |  | **X** |  |  |  |  | A.14.c.4 |  |
| … | … | … | … | … | … | … | … | … | … | … | … | … |
| A.14.d | **For each set of non-geostationary-satellite system operating parameters**  to be provided, if A.4.b.6*bis* indicates the use of an extended set of operating parameters  *Note* – There could be different sets of parameters at different frequency bands, but only one set of operating parameters for any frequency band used by the non-geostationary-satellite system |  |  |  |  |  |  |  |  |  | A.14.d |  |
| … | … | … | … | … | … | … | … | … | … | … | … | … |
| A.14.d.x1 | the minimum angle in degrees at the surface of the Earth between the lines to any two active non-GSO satellites. Mandatory if the value is non-zero. |  |  |  |  | **+** |  |  |  |  | A.14.d.x1 |  |
| A.14.d.x2 | the minimum angle in degrees at the non-GSO satellite between the lines to any two active non-GSO Earth stations. Mandatory if the value is non-zero. |  |  |  |  | **+** |  |  |  |  | A.14.d.x2 |  |
| A.14.d.x3 | the maximum number of non-geostationary earth stations tracked co-frequency by a non-geostationary satellite. If the maximum number of earth stations tracked at the satellite is not provided, the number of earth stations created for the EPFD(up) run will be used. |  |  |  |  | **+** |  |  |  |  | A.14.d.x3 |  |
| A.14.d.x4 | The non-GSO satellite selection method, specified as highest epfd, track duration or alpha table | … | … | … | … | **X** | … | … | … | … | A.14.d.x4 | … |
| A.14.d.x5 | The likelihood of a non-geostationary satellite having an alpha angle in degrees that is less than or equal to a set of given value defined for a range of latitudes, where the alpha angle is the minimum topocentric angle between the line to a non-GSO satellite and the line to any point on the visible geostationary arc. Mandatory if the non-GSO satellite selection method (A.14.d.x4) is alpha table. |  |  |  |  | **+** |  |  |  |  | A.14.d.x5 |  |

**Reasons**: To modify and add certain Appendix 4 data items to support implementation of agreed revisions to Recommendation ITU-R S.1503-3.

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1. 2 The Radiocommunication Bureau shall develop and keep up-to-date forms of notice to meet fully the statutory provisions of this Appendix and related decisions of future conferences. Additional information on the items listed in this Annex together with an explanation of the symbols is to be found in the Preface to the BR IFIC (Space Services).    (WRC‑12) [↑](#footnote-ref-1)