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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 8 toDocument 99(Add.22)-E** |
|  | **27 October 2023** |
|  | **Original: English** |
|  |
| Japan |
| Proposals for the work of the conference |
|  |
| Agenda item 7(F) |

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(F) Topic F - Excluding uplink service area in RR Appendix **30A** for Regions 1 and 3 and RR Appendix **30B**

Proposals

Japan supports Method F4 of the CPM Report, since it allows an administration to request the exclusion of its territory from the feeder-link service area of a satellite network of other administrations under RR Appendix **30A**, and includes definition of feeder link coverage area in Annex 3 of RR Appendix **30A**. In this Method the Bureau will generate coverage diagrams for List assignments based on the minimum ellipse determined by the set of test points of the satellite network and the reference antenna patterns used for replanning at WRC-97 of § 3.7.3 of Annex 3 to this Appendix, using the relevant BR software applications. The time limit for adjusting the coverage area is designated as follows:

For assignments where Resolution **49** **(Rev.WRC-19)** information has been received by the Bureau, the Bureau will use the set of test points as of the time of receipt of the Resolution **49** **(Rev.WRC‑19)** information.

For assignments entered into the Regions 1 and 3 feeder-link List before [16 December 2023], the Bureau will use the coverage diagram as contained in the List.

APPENDIX 30A (REV.WRC‑19)\*

Provisions and associated Plans and List1 for feeder links for the broadcasting-satellite service (11.7-12.5 GHz in Region 1, 12.2-12.7 GHz
in Region 2 and 11.7-12.2 GHz in Region 3) in the frequency bands
14.5-14.8 GHz2 and 17.3-18.1 GHz in Regions 1 and 3,
and 17.3-17.8 GHz in Region 2     (WRC‑03)

ADD J/99A22A8/1#2067

4.1.10e An administration may at any time during or after the above-mentioned four-month period inform the Bureau about its objection to being included in the service area of any assignment, even if this assignment has been entered in the List. The Bureau shall then inform the administration responsible for the assignment and exclude the territory and test pointsthat are within the territory of the objecting administration from the service area. The Bureau shall update the reference situation without reviewing the previous examinations.     (WRC‑23)

**Reasons:** It allows an administration to request the exclusion of its territory from the feeder-link service area of a satellite network of other administrations under RR Appendix **30A**.

ANNEX 1     (Rev.WRC‑19)

Limits for determining whether a service of an administration is considered
to be affected by a proposed modification to the Region 2 feeder-link Plan
or by a proposed new or modified assignment in the Regions 1 and 3
feeder-link List or when it is necessary under this Appendix to seek
the agreement of any other administration     (Rev.WRC‑03)

MOD J/99A22A8/2#2068

# 4 Limits to the interference into frequency assignments in conformity with the Regions 1 and 3 feeder-link Plan or with the Regions 1 and 3 feeder-link List or proposed new or modified assignments in the Regions 1 and 3 feeder-link List     (WRC‑03)

Under assumed free-space propagation conditions, the power flux-density of a proposed new or modified assignment in the feeder-link List shall not exceed the value of −76 dB(W/(m2 · 27 MHz)) at any point in the geostationary-satellite orbit, and the relative off-axis e.i.r.p. of the associated feeder-link antenna shall be in compliance with Fig. A (WRC‑97 curves) of Annex 3.     (WRC‑03)

With respect to § 4.1.1 *a)* or *b)* of Article 4, an administration in Region 1 or 3 is considered by the Bureau as being affected if the minimum orbital spacing between the wanted and interfering space stations, under worst-case station-keeping conditions, is less than 9°.     (WRC‑03)

However, an administration is not considered as being affected if, under assumed free-space propagation conditions, the effect of the proposed new or modified assignments in the feeder-link List is that the feeder-link equivalent protection margin[[1]](#footnote-1)35 corresponding to a test point of its assignment in the feeder-link Plan or the feeder-link List or for which the procedure of Article 4has been initiated, including the cumulative effect of any previous modification to the feeder-link List or any previous agreement, does not fall more than 0.45 dB below 0 dB, or, if already negative, more than 0.45 dB below the value resulting from:

i) the Regions 1 and 3 feeder-link Plan and List as established by WRC‑2000; *or*

ii) a proposed new or modified assignment to the feeder-link List in accordance with this Appendix; *or*

iii) a new entry in the Regions 1 and 3 feeder-link List as a result of the successful application of Article 4 procedures.     (WRC‑03)

For a proposed new or modified assignment to the feeder-link List, in the interference analysis, for each test point, the antenna characteristics described in § 3.5 of Annex 3 shall apply.     (WRC‑03)

For examination of a proposed new or modified assignment to the feeder-link List, in the interference analyses, the Bureau will generate coverage diagrams for assignments of ii) and iii) above based on the minimum ellipse determined by the set of test points of the satellite network[[2]](#footnote-2)36, [[3]](#footnote-3)37 and the reference antenna patterns used for replanning at WRC‑97 of § 3.7.3 of Annex 3 to this Appendix, using the relevant BR software applications.      (WRC‑23)

**Reasons:** For assignments where Resolution **49** **(Rev.WRC-19)** information has been received by the Bureau, the Bureau will use the set of test points as of the time of receipt of the Resolution **49** **(Rev.WRC-19)** information. For assignments entered into the Regions 1 and 3 feeder-link List before [16 December 2023], the Bureau will use the coverage diagram as contained in the List.

ANNEX 3

Technical data used in establishing the provisions and associated
Plans and Regions 1 and 3 feeder-link List, which should
be used for their application36     (Rev.WRC‑03)

# 1 Definitions

ADD J/99A22A8/3#2069

## 1.2*bis* Feeder-link coverage area

The area on the surface of the Earth delineated by a contour of a constant given value of relative receiving space station antenna gain which would permit the wanted quality of reception in the absence of interference.

NOTE 1 – The coverage area must be the smallest area which encompasses the service area. See also § 4.1.10e to this Appendix.

NOTE 2 – The coverage area, which will normally encompass the entire service area, will result from the intersection of the antenna beam (elliptical, circular, or shaped) with the surface of the Earth, and will be defined by a given value of relative receiving space station antenna gain. For example, it would be the area delineated by the contour corresponding to −3 dB of the relative receiving space station antenna gain. There will usually be an area outside the service area but within the coverage area in which the relative receiving space station antenna gain will be at least equivalent to the minimum specified value. Protection from uplink interference will be given to satisfy the required criterion depending on the receiving space station antenna contour, earth station transmitting power, the orbital separation angle, etc. (see also NOTE 1).

**Reasons:** It includes definition of feeder link coverage area in Annex 3 of RR Appendix **30A**.

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1. 35 For the definition of the equivalent protection margin, see § 1.7 of Annex 3. [↑](#footnote-ref-1)
2. 36 For assignments where Resolution **49 (Rev.WRC-19)** information has been received by the Bureau, the Bureau will use the set of test points as of the time of receipt of the Resolution **49 (Rev.WRC-19)** information. [↑](#footnote-ref-2)
3. 37 For assignments entered into the Regions 1 and 3 feeder-link List before [16 December 2023], the Bureau will use the coverage diagram as contained in the List. [↑](#footnote-ref-3)