|  |  |  |
| --- | --- | --- |
| A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23)Dubai, 20 November - 15 December 2023** |  |
|  |  |
|  |  |
| PLENARY MEETING | **Addendum 2 toDocument 65(Add.22)-E** |
|  | **31 October 2023** |
|  | **Original: English** |
|  |
| European Common Proposals |
| PROPOSALS FOR THE WORK OF THE CONFERENCE |
|  |
| Agenda item 7(B) |

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(B) Topic B - Non-GSO bringing into use post-milestone procedure

Introduction

Issue A of agenda item 7 at WRC-19 considered bringing into use (BIU) of frequency assignments to all non-GSO systems, as well as a milestone-based approach for the deployment of non-GSO systems in specific frequency bands and services. When deciding upon this issue, adopting a new milestone-based approach for the deployment of non-GSO satellite systems in Resolution **35** (WRC-19), WRC-19 invited ITU-R to study, as a matter of urgency, possible development of a post-milestone procedure taking into account the reporting defined in § 18 of the Resolution **[7(A)‑NGSO-MILESTONES] (WRC-19)**. This Resolution later was given the final number Resolution **35 (WRC-19)** and *resolves* 18 (§ 18) was renumbered *resolves* 19.

By having post-milestone procedures in place, it relieves the Radiocommunication Bureau (BR) of the burden to conduct an investigation under RR No. 13.6, whenever it appears from reliable information available that the use of a recorded assignment is not in accordance with the notified characteristics in the Master International Frequency Register (MIFR). If there is no decision taken at WRC-23 on these post-milestone procedures, the only possible solution for the BR is to resort to the strict application of RR No. 13.6. Under such circumstances, the notifying administration could be immediately asked by the BR to reduce the number of satellites in the MIFR in order to reflect the current number of satellites deployed. This is the consequence of a lack of specific procedures or instructions to the BR and could lead to undesirable consequences, such as the suppression of the number of satellites of the non-GSO satellite network or system, even if there is only a small discrepancy between the number of satellites deployed with the number of satellites recorded in the MIFR. Although the notifying administration could appeal against the decision made by the BR to the Radio Regulations Board (RRB), explaining the reason of such discrepancy between the number of satellites deployed with the number of satellites recorded in the MIFR, it would place an unnecessary reporting burden on administrations, unnecessary data collection efforts and filing procedures on the BR, next to requiring additional resources from the RRB.

If clearly defined provisions are developed for non-GSO systems in the context of post-milestone procedures, the above-mentioned consequences of only relying on the application of RR No. **13.6** by the BR, could be circumvented.

A decision at this WRC will give administrations time to adapt their launch strategy to these new rules after their third milestone, which will take place mainly from 2027 onwards.

CEPT proposes to develop a new Resolution to suppress and replace *resolves* 19 of Resolution **35** **(WRC-19)** and leave the rest of Resolution **35** **(WRC-19)** as is otherwise.

CEPT proposes to develop the post milestone procedures in a new Resolution based on similar regulatory mechanisms as in RR No. **11.49** and Resolution **35** **(WRC-19)** targeting a procedure allowing a certain reduction of satellites deployed for a maximum period of 3 years without changing the number of satellite notified in the MIFR.

To take into account the specificity of small constellations, CEPT proposes to have a threshold between 50% and 95% through a linear extrapolation to avoid boundary effects for constellations with less than 50 satellites and 95% for constellations with more than or equal to 50 satellites. The table below shows the required threshold X for different total number of satellites and the real threshold considering the “rounded down -1 satellite” mechanism as proposed in the Resolution. As shown with the proposed solution, the Post-Milestone procedure will be only applicable to constellations with more than 5 satellites and for a constellation of 10 satellites, the notifying administration will only start the post-milestone procedure when they have no more than 3 satellites deployed (i.e., 30% of the constellation).

|  |  |  |  |
| --- | --- | --- | --- |
| **Total Number of satellites indicated in the MIFR (NbSat)** | **X = (0.9\*NbSat+50) % for NbSat < 50****X = 95 %for NbSat ≥ 50** | **Minimum number of satellites required to reach the threshold** | **Real threshold considering "rounded down -1 satellite" mechanism** |
| 1 | 51% | 0 | - |
| 3 | 53% | 0 | - |
| 5 | 55% | 1 | 20% |
| 7 | 56% | 2 | 29% |
| 10 | 59% | 4 | 40% |
| 15 | 64% | 8 | 53% |
| 20 | 68% | 12 | 60% |
| 30 | 77% | 22 | 73% |
| 40 | 86% | 33 | 83% |
| 50 | 95% | 46 | 92% |
| 100 | 95% | 94 | 94% |
| 500 | 95% | 474 | 95% |
| 5 000 | 95% | 4 749 | 95% |

Proposals

ARTICLE 11

Notification and recording of frequency
assignments1, 2, 3, 4, 5, 6, 7    (WRC‑19)

Section III – Maintenance of the recording of frequency assignments to non-geostationary-satellite systems in the Master Register     (WRC‑19)

MOD EUR/65A22A2/1#1994

11.51 For frequency assignments to some non-geostationary-satellite systems in specific frequency bands and services, Resolution**35 (Rev.WRC‑23)** and Resolution **[EUR-7(B)-NGSO-POST-MILESTONE-PROCEDURE] (WRC‑23)** shall apply.     (WRC‑23)

MOD EUR/65A22A2/2#1993

RESOLUTION 35 (REV.WRC‑23)

A milestone-based approach for the implementation of frequency assignments
to space stations in a non-geostationary-satellite system
in specific frequency bands and services[[1]](#footnote-1)1

The World Radiocommunication Conference (Dubai, 2023),

…

resolves

…

18 that the suspension of the use of frequency assignments in accordance with No. **11.49** at any point prior to the end of a milestone period as specified in *resolves* 7*a)*, *b)* or *c)* or 8*a)*, *b)* or *c)* of this Resolution, as applicable, shall not alter or reduce the requirements associated with any of the remaining milestones as derived from *resolves* 7*a)*, *b)* or *c)* or 8*a)*, *b)* or *c)*, as appropriate,

instructs the Radiocommunication Bureau

…

ADD EUR/65A22A2/3#1995

Draft New Resolution [EUR-7(B)-NGSO-POST-MILESTONE-PROCEDURE] (WRC‑23)

Enhanced suspension procedure for frequency assignments to space stations in a non-geostationary-satellite system in the fixed-satellite, mobile-satellite and broadcasting-satellite services subject to Resolution 35 (Rev.WRC‑23)

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that one of the main motivations for developing Resolution **35 (WRC‑19)** was to find a way to ensure that the content of the Master International Frequency Register (MIFR) for non-GSO systems closely aligns with what is actually deployed in space;

*b)* that any regulatory mechanism for the post milestone procedure to non-GSO systems should not impose an unnecessary burden on the administrations and the Radiocommunication Bureau (BR),

recognizing

*a)* that Resolution **35** **(Rev.WRC‑23)** applies to frequency assignments to non-GSO systems brought into use in accordance with Nos. **11.44** and **11.44C**, in the frequency bands and for the services listed in its *resolves*1;

*b)* thatthe magnitude of the typical variation of the number of satellites deployed and capable of transmitting or receiving the recorded frequency assignments needs to be carefully considered to avoid a requirement to report variations that have inconsiderable consequence, as is the case for very small constellations,

resolves

1 that this Resolution applies to non-GSO satellite systems with space stations with an apogee altitude lower than 15 000 km having completed the milestone period for those subject to Resolution **35 (Rev.WRC‑23)** withat least one satellite deployed on notified orbital plane and capable of transmitting or receiving according to the recorded frequency assignments;

2 that the notifying administration shall inform the BR of the date of commencement of any continuous period exceeding 6 months during which the number of satellites deployed on notified orbital planes (as that term is used in Resolution **35 (Rev.WRC‑23)**) and capable of transmitting or receiving the recorded frequency assignments is below X% (rounded down to the lower integer) of the total number of satellites indicated in the MIFR entry minus one satellite with:

 $X=0.9×Nb\_{Total}+50$ for *NbTotal* < 50

 *X* = 95 for *NbTotal* ≥ 50

where *NbTotal* is the total number of satellites indicated in the MIFR;

3 that upon receipt of the information submitted under *resolves*2, the BR shall promptly make it available on the ITU website;

4 that the notifying administrations shall inform the BR as soon as possible when the number of satellites deployed on notified orbital planes and capable of transmitting or receiving the recorded assignments has reached again at least X% (rounded down to the lower integer) of the total number of satellites indicated in the MIFR minus one satellite;

5 that, in any case, the date at which the number of satellites deployed on notified orbital planes and capable of transmitting or receiving the recorded assignments reaches again at least X% (rounded down to the lower integer) of the total number of satellites indicated in the MIFR minus one satellite shall not be later than three years from the date of commencement of the continuous period referred to in *resolves*2 provided that the notifying administration informs the BR pursuant to *resolve* 2 within 6 months of the start of that continuous period;

6 that, if the notifying administration informs the BR under *resolves*2 more than 6 months after the date of commencement of the continuous period referred to in *resolves*2, the number of years referred to in *resolves*5 shall be reduced by the amount of time that has elapsed between the end of the 6-month period and the date at which the BR is informed under *resolves*2;

7 that, if the notifying administration informs the BR more than 21 months after the date of commencement of the continuous period referred to in *resolves*2, the notifying administration shall submit to the BR, within 90 days:

*a)* the number of satellites capable of transmitting or receiving the frequency assignments actually deployed in that system, and

*b)* the modifications to the characteristics of the notified or recorded frequency assignments to reduce the total number of satellites indicated in the MIFR to a number of satellites not exceeding Y satellites (rounded up to the higher integer);

with $Y=\frac{-50+\sqrt{50^{2}+360×\left(Nb\_{Deployed}+1\right)}}{1.8}$ for *NbDeployed* < 46

 $Y=\frac{Nb\_{Deployed}+1}{0.95}$ for *NbDeployed* ≥ 46

where *NbDeployed* is the total number of deployed satellites referred in *resolves*7*a)* or 9, as appropriate;

8 that, ninety days before the end of the period referred to in *resolves* 5 or 6, as appropriate, the BR shall send a reminder to the notifying administration;

9 that the notifying administration shall submit to the BR, no later than 30 days after the end of the period referred to in *resolves*5 or 6, as appropriate, the number of satellites capable of transmitting or receiving the frequency assignments actually deployed in that system;

10 that, if the number of satellite indicated in *resolves*9 still falls below X% (rounded down to the lower integer) of the total number of satellites indicated in the MIFR entry minus one satellite, the notifying administration shall submit to the BR, no later than 90 days after the end of the period referred to in *resolves* 5 or 6, as appropriate, the modifications to the characteristics of the notified or recorded frequency assignments to reduce the total number of satellites indicated in the MIFR to a number of satellites not exceeding Y satellites (rounded up to the higher integer);

11 that, upon receipt of the modifications to the characteristics of the notified or recorded frequency assignments as referred to in *resolves* 7 or 9, as appropriate:

*a)* the BR shall promptly make this information available “as received” on the ITU website;

*b)* the BR shall conduct an examination for compliance with Nos. **11.43A/11.43B**, as appropriate;

*c)* the BR, for the purpose of No. **11.43B**, shall retain the original dates of entry of the frequency assignments in the MIFR if:

i) the BR reaches a favourable finding under No.**11.31**; and

ii) the modifications are limited to a reduction of the number of orbital planes (Appendix **4** data item A.4.b.1) and modifications to the right ascension of the ascending node of each plane (Appendix **4** data item A.4.b.5.a/A.4.b.4.g), the longitude of the ascending node (Appendix **4** data item A.4.b.6.g) and its date and time (Appendix **4** data items A.4.b.6.h and A.4.b.6.i.a) associated with the remaining orbital planes, or reduction of the number of space stations per plane (Appendix **4** data item A.4.b.4.b) and modifications of the initial phase angle of the space stations (Appendix **4** data item A.4.b.5.b/h) within planes; and

iii) the notifying administration provides a commitment stating that the characteristics as modified will not cause more interference or require more protection than the characteristics provided in the latest notification information published in Part I‑S of the Bureau´s International Frequency Information Circular (BR IFIC) for the frequency assignments (see Appendix **4** data item A.23.a);

*d)* the BR shall publish the information provided and its findings in the BR IFIC;

12 that, if a notifying administration fails to communicate the information required under *resolves* 7 or 9, as appropriate, the BR shall promptly send to the notifying administration a reminder asking the administration to provide the required information within 30 days from the date of this reminder from the BR;

13 that, if a notifying administration fails to provide information after the reminder sent under *resolves* 12, the BR shall send to the notifying administration a second reminder asking it to provide the required information within 15 days from the date of the second reminder;

14 that, if a notifying administration fails to provide the required information under *resolves*7 or 9, as appropriate, following the reminders under *resolves* 12 and 13, the BR shall no longer consider the frequency assignments under subsequent examinations under Nos. **9.36**, **11.32** or **11.32A**, and inform administrations having frequency assignments subject to Sub-Section IA of Article **9** that those assignments shallnot cause harmful interference to, nor claim protection from, other frequency assignments recorded in the MIFR with a favourable finding under No.**11.31**,

instructs the Radiocommunication Bureau

1 to take the necessary actions to implement this Resolution;

2 to report any difficulties encountered in the implementation of this Resolution to WRC‑27;

3 to publish the list of non-GSO satellite systems whose assignments shall not cause harmful interference to, nor claim protection from, other frequency assignments recorded in the MIFR with a favourable finding under No. **11.31** in accordance with *resolves* 14 above.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 1 See also Resolution **[EUR-7(B)-NGSO-POST-MILESTONE-PROCEDURE] (WRC‑23)**. [↑](#footnote-ref-1)