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| **World Radiocommunication Conference (WRC-19) Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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|  | CPG(19)143 ANNEX VIII-19I |
| PLENARY MEETING | **Addendum 9 to Document 16(Add.19)-E** |
|  | **23 July 2019** |
|  | **Original: English** |
|  | |
| European Common Proposals | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 7(I) | |

7 to consider possible changes, and other options, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an 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 rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

7(I) Issue I - Modified regulatory procedure for non-GSO satellite systems with short-duration missions

Introduction

Non-GSO satellites with short-duration missions are treated the same as all other satellites under RR Articles **9** and **11**. Given their short development cycle, short lifetimes, and typical missions, a modified regulatory procedure for the advance publication, notification and Master International Frequency Register (MIFR) recording of non‑GSO satellite systems with short-duration missions may be beneficial for these systems. The successful and timely development and operation of non‑GSO satellite systems with short-duration missions may require regulatory procedures that take account of the nature and timing for deployment of these systems.

Many of these non-GSO satellite systems are being developed by academic institutions, amateur satellite organizations, or by developing countries that are using these satellites to build their expertise in space capability. The current regulatory procedures for satellite networks and systems may result in some difficulties for non-GSO satellite systems with short-duration missions (see RoP for RR No. **9.11A**). This can have adverse consequences in the management of interference. Additionally, these short-duration satellite systems are beginning to operate outside the amateur-satellite service. There is no dedicated radiocommunication service associated with short-duration satellite system frequency usage, however non-GSO satellites with short-duration missions shall operate in spectrum allocated to satellite services in accordance with the relevant conditions of the allocation.

A draft new WRC Resolution, together with an associated regulatory procedure for non-GSO satellite systems with short-duration missions, has been developed to modify the regulatory process for short-duration missions.

Modifications to RR Articles **9** and **11**, Appendix **4** including the addition of a new WRC Resolution are proposed.

These European Proposals correspond to Method I2 of the CPM Report proposing a modified regulatory procedure for non-GSO-satellite networks and systems with short duration missions not subject to Section II of RR Article **9**.

Proposals

MOD EUR/16A19A9/1

ARTICLE 9

Procedure for effecting coordination with or obtaining agreement of other administrations1, 2, 3, MOD 4, 5, 6, 7, 8, 9    (WRC‑19)

Section I − Advance publication of information on satellite  
networks or satellite systems

General

MOD EUR/16A19A9/2

9.1 Before initiating any action under Article 11 in respect of frequency assignments for a satellite network or system not subject to the coordination procedure described in Section II of Article **9** below, an administration, or one10 acting on behalf of a group of named administrations, shall send to the Bureau a general description of the network or system for advance publication in the International Frequency Information Circular (BR IFIC) not earlier than seven years and preferably not later than two years before the planned date of bringing into use of the network or system (see also No. 11.44). The characteristics to be provided for this purpose are listed in Appendix 4. The notification information may also be communicated to the Bureau at the same time, but shall be considered as having been received by the Bureau not earlier than four months after the date of publication of the advance publication information.     (WRC‑19)

MOD EUR/16A19A9/3

9.2B On receipt of the complete information sent under Nos. 9.1 and 9.2, the Bureau shall publish11 it in a Special Section of its BR IFIC within two months. When the Bureau is not in a position to comply with the time limit referred to above, it shall periodically so inform the administrations, giving the reasons therefor.     (WRC‑19)

MOD EUR/16A19A9/4

4 A.9.4 Resolution **49 (Rev.WRC‑15)**, Resolution **552** **(Rev.WRC‑15)** or Resolution **[EUR-A7(I)-NGSO SHORT DURATION] (WRC-19)**, as appropriate, shall also be applied with respect to those satellite networks and satellite systems that are subject to it.    (WRC‑19)

Sub-Section IA − Advance publication of information on satellite networks or satellite systems that are not subject to coordination procedure under Section II

MOD EUR/16A19A9/5

9.3 If, upon receipt of the BR IFIC containing information published under No. 9.2B, any administration believes that interference which may be unacceptable may be caused to its existing or planned satellite networks or systems, it shall within four months of the date of publication of the BR IFIC communicate to the publishing administration its commentsADD XX on the particulars of the anticipated interference to its existing or planned systems. A copy of these comments shall also be sent to the Bureau. Thereafter, both administrations shall endeavour to cooperate in joint efforts to resolve any difficulties, with the assistance of the Bureau, if so requested by either of the parties, and shall exchange any additional relevant information that may be available. If no such comments are received from an administration within the aforementioned period, it may be assumed that the administration concerned has no objections to the planned satellite network(s) of the system on which details have been published.      (WRC‑19)

ADD EUR/16A19A9/6

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xx 9.3.1Upon receipt of the International Frequency Information Circular (BR IFIC) containing information published under No. **9.2B** for frequency assignments to non-GSO satellite systems subject to Resolution **[EUR-A7(I)-NGSO SHORT DURATION] (WRC-19)**, any administration which believes that unacceptable interference may be caused to its existing or planned satellite networks or systems shall, as soon as possible and within a period of four months, communicate with the notifying administration, with copy to the Bureau, these comments on the particulars of the potential interference to its existing or planned systems. The Bureau shall promptly make these comments available “as received”, on the ITU website.     (WRC‑19)

MOD EUR/16A19A9/7

ARTICLE 11

Notification and recording of frequency   
assignments1, MOD 2, 3, 4, 5, 6, 7, 8    (WRC‑19)

MOD EUR/16A19A9/8

2 A.11.2 Resolution **49 (Rev.WRC‑15)**, Resolution **552 (Rev.WRC‑15)** or Resolution **[EUR-A7(I)-NGSO SHORT DURATION] (WRC‑19)**, as appropriate, shall also be applied with respect to those satellite networks and satellite systems that are subject to it.     (WRC‑19)

APPENDIX 4 (REV.WRC‑15)

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 EUR/16A19A9/9

**TABLE A**

GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK,   
EARTH STATION OR RADIO ASTRONOMY STATION     (Rev.WRC‑15)

| **Items in Appendix** | ***A \_ GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK,  EARTH STATION OR RADIO ASTRONOMY STATION*** | **Advance publication of a geostationary- satellite network** | **Advance publication of a non-geostationary-satellite network subject to coordination under Section II  of Article 9** | **Advance publication of a non-geostationary-satellite network 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** | **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** |
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| … | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** |
| **A.2** | **DATE OF BRINGING INTO USE** |  | | | | | | | | | **A.2** |  |
| A.2.a | the date (actual or foreseen, as appropriate) of bringing the frequency assignment (new or modified) into use  For a frequency assignment to a GSO space station, including frequency assignments in Appendices **30, 30A** and **30B**, the date of bringing into use is as defined in Nos. **11.44B** and **11.44.2**  Whenever the assignment is changed in any of its basic characteristics (except in the case of a change under A.1.a, the date to be given shall be that of the latest change (actual or foreseen, as appropriate)  Required only for notification |  |  |  | **+** | **+** | **+** | **+** | **+** | **+** | A.2.a |  |
| A.2.b | for a space station, the period of validity of the frequency assignments (see Resolution **4 (Rev.WRC-03)** and Resolution **[EUR-A7(I)-NGSO SHORT DURATION] (WRC‑19)**, as appropriate) |  |  | **X** | **X** | **X** |  |  |  |  | A.2.b |  |
| … | … | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** | **…** |

ADD EUR/16A19A9/10

Draft New Resolution [EUR-A7(i)-NGSO SHORT DURATION] (WRC-19)

Modified regulatory procedures for the processing of frequency assignments to non-GSO satellite networks or systems identified as short-duration mission[[2]](#footnote-2)1 in bands not subject to the application of Section II of Article 9

The World Radiocommunication Conference (Sharm el-Sheikh, 2019),

considering

*a)* that some non-GSO satellites with short-duration missions to date have been operating for their entire mission duration without being notified or recorded;

*b)* that successful and timely development and operation of non-GSO satellite networks or systems with short-duration missions may require regulatory procedures which take account of the short development cycle, the short lifetimes and the typical missions of such satellites, and therefore the application of certain provisions of Articles **9** and **11** of the Radio Regulations may need to be adapted to take account of the nature of these satellites;

*c)* that these satellites typically have a short (one to two years) development time and are low cost, often using off-the-shelf components;

*d)* that the operational lifetime of these satellites generally ranges from several weeks up to not more than three years;

*e)* that non-GSO satellites with short-duration missions are being used for a wide variety of applications, including remote sensing, space weather research, upper atmosphere research, astronomy, communications, technology demonstration and education, and therefore may operate under various radiocommunication services;

*f)* that advances in the field of satellite technology have resulted in non-GSO satellites with short-duration missions becoming a means for developing countries to become involved in space activities,

considering further

*a)* that the application of provisions of Articles **9** and **11** to frequency assignments to non-GSO satellite networks or systems identified as short-duration mission as prescribed in this Resolution should not adversely or otherwise affect the regulatory treatment of other systems;

*b)* that the application of any modified regulatory procedure should not change the sharing status with respect to networks and systems not applying the modified regulatory procedure, both terrestrial and space, in frequency bands which may be used by non-GSO satellite systems with short-duration missions,

recognizing

*a)* that Resolution **ITU‑R 68** seeks to improve awareness and increase knowledge on existing regulatory procedures for small satellites;

*b)* that, even though satellite mass and size are not relevant from a frequency management perspective, the small mass and small dimensions of these satellites have been some of the major contributors to their success amongst new space-faring nations;

*c)* that all the non-GSO satellite networks or systems operating in bands not subject to Section II of Article **9** are, irrespective of the period of validity of their associated frequency assignments, subject to No. **9.3** and its process for resolution of difficulties;

*d)* that non-GSO satellite systems with short-duration missions are not be used for safety-of-life services,

noting

*a)* Report ITU‑R SA.2312 on “Characteristics, definitions and spectrum requirements of nanosatellites and picosatellites, as well as systems composed of such satellites”;

*b)* Report ITU‑R SA.2348 which contains descriptions of current regulatory practices relating to space network notification of such satellites,

resolves

1 that this Resolution shall apply only to non-GSO networks or systems identified by the notifying administration as short duration mission;

2 that non-GSO satellite networks or systems identified as short-duration mission operating under any space radiocommunication service in bands not subject to the application of Section II of Article **9** shall be subject to the provisions of the Radio Regulations with the exceptions stipulated in the Annex to this Resolution;

3 that non-GSO satellite networks or systems identified as short-duration mission operating in frequency bands allocated to satellite services shall operate in accordance with the relevant conditions of the allocated satellite service;

4 that non-GSO satellite networks or systems identified as short-duration mission using spectrum allocated to the amateur-satellite service shall operate in accordance with the definition of the amateur-satellite service as contained in Article **25** of the Radio Regulations;

5that the total number of satellites in a non-GSO satellite network or system identified as short-duration mission shall not exceed ten satellites;

6 that the maximum period of operation and validity of frequency assignments of a non‑GSO satellite network or system identified as short-duration mission shall not exceed three years from the date of bringing into use of the frequency assignments (see Annex 1 to this Resolution for the definition of date of bringing into use for such network or system), without any possibility of extension, after which the recorded assignments shall be cancelled;

7 that for the purpose of this Resolution, a non-GSO satellite network or system identified as short-duration mission shall have a single launch date associated with the first launch (in the case of systems with multiple launches) and that launch date shall be defined as the date on which the first satellite of the non-GSO satellite network or system with a short-duration mission is placed into its notified orbital plane,

instructs the Director of the Radiocommunication Bureau

1 to establish, as soon as possible, proper means to identify the non-GSO satellite networks or systems with short-duration missions subject to this Resolution;

2 to expedite the online publication of notices for such networks or systems, in addition to the normal publication of notices;

3 to provide the necessary assistance to administrations in the implementation of this Resolution,

invites administrations

1 to exchangeinformation associated with non-GSO satellite networks or systems identified as short-duration missions and to make every possible effort to resolve interference that may be unacceptable to existing or planned satellite networks or systems, including those with short-duration missions;

2 to disseminate information on non-GSO satellite networks or systems identified as short-duration missions in accordance with the provisions of Resolution **ITU‑R 68**;

3 to provide their comments on the application of No. **9.3**, upon receipt of the International Frequency Information Circular (BR IFIC) containing information published under No. **9.2B**, as soon as possible within a period of four months from the date of publication of the (BR IFIC) and to communicate with the notifying administration, with copy to the Bureau, these comments on the particulars of the potential interference to its existing or planned systems.

ANNEX 1

Application of the provisions of Articles 9 and 11 for non-GSO satellite networks and systems identified as short-duration missions

1 The general provisions of the Radio Regulations shall apply tonon-GSO satellite networks or systems identified as short-duration mission with the following exceptions/additions/amendments.

2 That when submitting advance publication information under No. **9.1**, administrations shall submit the best estimated orbital characteristics (Appendix **4** data item A.4.b.4) known at the early development time of the satellite project.

3 In the application of No. **9.1**, the notification information cannot be communicated to the Bureau at the same time, and can only be submitted after the launch of a satellite in the case of a network or the first satellite in the case of a system with multiple launches.

4 Notices relating tonon-GSO satellite networks or systems identified as short-duration mission shall be communicated to the Bureau only after the launch of a satellite in the case of a satellite network or the first satellite in the case of a system requiring multiple launches, and not later than two months after the date of bringing into use. This provision applies instead of No. **11.25** for frequency assignments to non-GSO satellite networks or systems with short-duration mission. Irrespective of the date of receipt of the notified characteristics of the non-GSO satellite network or system with a short-duration mission under this Resolution, the maximum period of validity of frequency assignments of this system shall not exceed the time limit in *resolves* 6 of this Resolution. At the expiry date of period of validity, as described in *resolves* 6 of this Resolution, the Bureau shall publish a suppression of the related Special Section.

*NOTE: In developing the alternative application of RR No.* ***11.25*** *above it was recognized that it would be important to include a requirement for administrations to also submit a commitment to the Bureau stating that in case unacceptable interference caused by the short-duration mission system is not resolved, it shall undertake to eliminate the interference or reduce it to an acceptable level. It was further recognized that this commitment should be considered part of the complete information for the notice and should therefore be included as a new data item under Appendix* ***4****.*

5 In the application of No. **11.28** the Bureau shall make available on its website the complete information received instead of publication in the BR IFIC. Administrations may comment upon this information in accordance with No. **11.28.1**.

6 In addition to the application of No. **11.36** the Bureaushallpublish the characteristics of the system together with the findings under No. **11.31** in the BR IFIC and on its website within no more than four months from the date of receipt of complete information under No. **11.28**. When the Bureau is not in a position to comply with the time-limit referred to above, it shall periodically so inform the notifying administration, giving the reasons therefor.

7 In the application of No. **11.44**, the date of bringing into use of a non-GSO satellite network or system identified as short-duration mission shall be considered automatically as the launch date of a satellite in the case of a non-GSO satellite network or the first satellite in the case of a non-GSO satellite system requiring multiple launches (see *resolves* 7of this Resolution).

8 No. **11.49** shall not apply to frequency assignments to non-GSO satellite networks or systems identified as short-duration mission.

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)
2. 1 For the purpose of this Resolution, the definition of non-GSO satellite systems identified as short-duration missions is contained in *resolves* 4 and 5 of this Resolution. [↑](#footnote-ref-2)