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| **World Radiocommunication Conference (WRC-19)Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
|  |  |
|  | CPG(18)073 ANNEX V-04 |
| PLENARY MEETING | **Addendum 4 toDocument XXX-E** |
|  | **Date** |
|  | **Original: English** |
|  |
| European Common Proposals |
| Proposals for the work of the conference |
|  |
| Agenda item 1.4 |

1.4 to consider the results of studies in accordance with Resolution **557 (WRC-15)**, and review, and revise if necessary, the limitations mentioned in Annex 7 to Appendix **30 (Rev.WRC‑15)**, while ensuring the protection of, and without imposing additional constraints on, assignments in the Plan and the List and the future development of the broadcasting-satellite service within the Plan, and existing and planned fixed-satellite service networks;

Introduction

Studies in CEPT reviewed and analyzed the limitations described in Annex 7 to Appendix **30** of Radio Regulations and concluded the following:

A1 Limitations

* Limitation A1a: No assignments in the Region 1 List further west than 37.2°W.
* Limitation A1b: No assignments in the Region 1 List further east than 146°E.

Some studies support that Limitation A1a can be deleted taking into account that existing regulatory provisions sufficiently protect the potential affected services in Region 2 (Option 1). Other studies support that to delete A1a Limitation additional regulatory measures are required to not limit the future deployment of FSS satellite networks in Region 2 (Option 2).

* Option 1: Deletion A1a without any special regulatory measures.
* Option 2: Deletion A1a with additional measures including a new resolution (Draft New Resolution [EUR-A14-LIMITA1A2]) to not limit the future deployment of Region 2 FSS networks. This new resolution proposes to apply the same pfd coordination thresholds as contained in Annex 4 to Appendix **30**, with the difference that for future Region 2 FSS networks with respect to future Region 1 BSS frequency assignments filed further west of 37.2°W, the pfd will be calculated only on the BSS network’s test points instead of the complete service area. It is important to note that the same resolution addresses A1a Option 2 and A2a Option 2.

Regarding A1b limitation, despite the same regulatory provisions that protect the potentially affected services in Regions 1 and 3 exist, there is not enough geographical separation between land masses in Regions 1 and 2 in some parts of the Earth (i.e. Chukotka and Alaska). For this reason CEPT supports the retention of the Limitation A1b

A2 Limitations

– Limitation A2a: No modification in the Region 2 Plan further east than 54°W.

– Limitation A2b: No modification in the Region 2 Plan further east than 44°W.

– Limitation A2c: No modification in the Region 2 Plan further west than 175.2°W.

Some studies support that A2a limitation can be deleted taking into account that existing regulatory provisions sufficiently protect the potentially affected services in Region 1 (Option 1). Other studies support that to delete A2a limitation, additional regulatory measures are required to not limit the future deployment of FSS satellite networks in Region 1 (Option 2).

– Option 1: Deletion A2a without any special regulatory measures.

– Option 2: Deletion A2a with additional measures including a new resolution (Draft New Resolution [EUR-A14-LIMITA1A2]) to not limit the future deployment of Region 1 FSS networks. This new resolution proposes to apply the same pfd coordination thresholds as contained in Annex 4 to Appendix **30**, with the difference that for future Region 1 FSS networks with respect to future Region 1 BSS frequency assignments filed further east of 54°W, the pfd will be calculated only on the BSS network’s test points instead of the complete service area. It is important to note that the same resolution addresses A1a Option 2 and A2a Option 2.

A2b limitations can be deleted taking into account that existing regulatory provisions sufficiently protect the potentially affected services in Region 1. In addition, the geographical separation that exists between the regions where these limitations apply, provides additional protection.

Regarding A2c limitation, despite the same regulatory provisions that protect the potentially affected services in Regions 1 and 3 exist, there is not geographical separation advantage between land masses in Region 1 and 2 in some parts of the Earth (i.e. Chukotka and Alaska). For this reason CEPT supports the retention of the Limitation A2c.

A3 Limitations

– A3a limitation: No assignments in the Regions 1 & 3 List outside specific allowable portions of the orbital arc between 37.2°W and 10°E specified in Table 1 of Annex 7 to Appendix 30.

– Limitation A3b: Maximum e.i.r.p. of 56 dBW for assignments in the Regions 1 & 3 List at specific allowable portions of the orbital arc between 37.2°W and 10°E specified in Table 1 of Annex 7 to Appendix 30.

– Limitation A3c: Maximum power flux density of -138 dB(W/(m2·27 MHz)) at any point in Region 2 by assignments in the Regions 1 & 3 List located at 4°W and 9°E.

In relation to the A3a limitation, studies concluded that to protect “implemented” satellite networks in the allowable portions of the orbital arc specified in the Table 1 of Annex 7 to Appendix **30** containing antenna sizes smaller than 60 cm, while at the same time, removing the orbital arc limitations to the extent possible, additional regulatory measures were required. In this sense, CEPT supports to delete the paragraph that refers to this limitation in Annex 7 to Appendix 30 of RR and to incorporate a new Resolution (Draft New Resolution [EUR-A14-LIMITA3]). This Resolution proposes an alternative method to determine whether implemented satellite networks with antenna sizes smaller than 60 cm are affected by new satellite networks located in some specific orbital locations. More specifically, it proposes that in the examination performed by the Bureau, the PFD mask criteria will not be taken into account and only the EPM criteria will be considered. This solution avoids the use of the existing PFD mask criteria, that was not designed to protect antennas smaller than 60 cm and ensures the protection of implemented satellite networks including them.

In relation to the A3a limitation, the “implemented” satellite networks are Regions 1 & 3 BSS networks in the orbital arc 37.2°W and 10°E with antenna sizes smaller than 60 cm:

– for which complete Appendix **4** information had been received by the Bureau under § 4.1.3 of Appendix **30** prior to 28 November 2015; and

– for which complete Appendix **4** information had been received by the Bureau under § 4.1.12 of Appendix **30** prior to 23 November 2019; 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 23 November 2019; and

– for which complete Appendix **4** information had been received by the Bureau under § 5.1.2 of Appendix **30** prior to 23 November 2019; and

– brought into use, and for which the date of bringing into use has been confirmed to the Bureau before 23 November 2019

Regarding the A3b and A3c limitations, studies demonstrated that these limitations can be deleted as potential affected services will not be impacted.

B Limitation

B Limitation: grouping concept of space stations in the Region 2 Plan

Studies concluded that Limitation B deals with the grouping concept of space stations in the Region 2 Plan and therefore decisions over this limitation are out of the scope of CEPT, therefore no modification for this limitation is proposed.

*Editor’s note: the following proposals in this draft ECP currently include two options for A1 and A2 limitations and two options for A3 limitations*

Additional regulatory measures

After removal of the relevant limitations described above, Administrations with national assignments in the Regions 1 and 3 Plan with equivalent downlink protection margin values equal or below -10 dB will have priority to submit new satellite networks in the new allowed orbital slots. These proposed regulatory measures are implemented in a new Resolution (Draft New Resolution [EUR-A14-PRIORITY]). The period of priority will be of 90 days from date of entry into force of the modifications to Annex **7** of Appendix **30**. As a general rule, new and revised Resolutions and Recommendations enter into force at the time of the signing of the Final Acts of a conference and revisions to the Radio Regulations (RR) enter into force on 1st January 2021. Considering the importance of the proposed modification of Annex 7 to help administrations to improve equitable access to satellite orbit resources by providing priority to Administrations with a degraded reference situation, the CEPT proposes to apply as of 23 November 2019 the revised Annex **7** of Appendix **30**. To this effect, a revision of Article **59** and a draft new Resolution (Draft New Resolution [EUR-A14-ENTRY-INTO-FORCE]) are proposed.

Proposal

**OPTION 1 (METHOD B OF THE DRAFT CPM TEXT)**

ARTICLE 59

Entry into force and provisional application
of the Radio Regulations    (WRC‑12)

ADD EUR/XXXA4/1

59.15 The other provisions of these Regulations, as revised by WRC‑19, shall enter into force on 1 January 2021, with the following exceptions:    (WRC‑19)

ADD EUR/XXXA4/2

59.16 – the revised provisions for which other effective dates of application are stipulated in Resolution:

 draft new **Resolution [EUR-A14-ENTRY-INTO-FORCE] (WRC‑19)**    (WRC‑19)

APPENDIX 30 (REV.WRC‑15)[[1]](#footnote-1)\*

Provisions for all services and associated Plans and List[[2]](#footnote-2)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)

MOD EUR/XXXA4/3

ANNEX 7     (Rev.WRC‑19)

Orbital position limitationsADD [[3]](#footnote-3)YY

MOD EUR/XXXA4/4

1) No broadcasting satellite serving an area in Region 1 and using a frequency in the band 11.7-12.2 GHz shall occupy a nominal orbital position further east than 146° E.

MOD EUR/XXXA4/5

2) No broadcasting satellite serving an area in Region 2 that involves an orbital position different from that contained in the Region 2 Plan shall occupy a nominal orbital position:

 further west than 175.2° W in the band 12.2-12.7 GHz.

 However, modifications necessary to resolve possible incompatibilities during the incorporation of the Regions 1 and 3 feeder-link Plan into the Radio Regulations shall be permitted.

**Reasons:**

SUP EUR/XXXA4/6

3) The purpose of the following orbital position and e.i.r.p. limitations is to preserve access to the geostationary-satellite orbit by the Region 2 fixed-satellite service in the band 11.7‑12.2 GHz. Within the orbital arc of the geostationary-satellite orbit between 37.2° W and 10° E, the orbital position associated with any proposed new or modified assignment in the Regions 1 and 3 List of additional uses shall lie within one of the portions of the orbital arc listed in Table 1. The e.i.r.p. of such assignments shall not exceed 56 dBW, except at the positions listed in Table 2.

SUP EUR/XXXA4/7

TABLE 1

Allowable portions of the orbital arc between 37.2°W and 10° E for new or modified
assignments in the Regions 1 and 3 Plan and List

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Orbital position** | 37.2° W to36° W | 33.5°Wto32.5° W | 30° Wto29° W | 26° Wto24° W | 20° Wto18° W | 14° W to12° W | 8° W to6° W | 4° W 1 | 2° W to0° | 4° Eto6° E | 9° E 1 |
| 1 Proposed new or modified assignments in the List which involve this orbital position shall not exceed the power flux-density limit −138 dB(W/(m2 · 27 MHz)) at any point in Region 2. |

SUP EUR/4XXXA4/8

TABLE 2

Nominal positions in the orbital arc between 37.2° W and 10° E at which the
e.i.r.p. may exceed the limit of 56 dBW

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Orbital position** | 37° W± 0.2° | 33.5° W | 30° W | 25° W ± 0.2° | 19° W ± 0.2° | 13° W ± 0.2° | 7° W ± 0.2° | 4° W 1 | 1° W ± 0.2° | 5° E ± 0.2° | 9° E 1 |
| 1 Proposed new or modified assignments in the List which involve this orbital position shall not exceed the power flux-density limit –138 dB(W/(m2 · 27 MHz)) at any point in Region 2. |

NOC

B The Region 2 Plan is based on the grouping of the space stations in nominal orbital positions of ±0.2° from the centre of the cluster of satellites. Administrations may locate those satellites within a cluster at any orbital position within that cluster, provided they obtain the agreement of administrations having assignments to space stations in the same cluster. (See § 4.13.1 of Annex 3 to Appendix **30A**.)

ADD EUR/XXXA4/9

Draft New Resolution [EUR-A14- LIMITA3](WRC-19)

Protection of implemented BSS networks in the orbital arc of the geostationary‑satellite orbit between 37.2°W and 10°E
in the band 11.7-12.2 GHz

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

considering

*a)* that the provisions applying to the broadcasting-satellite service (BSS) in the frequency bands 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 are contained in Appendix **30**;

*b)* that systems in the fixed satellite service (FSS) and the broadcasting satellite service share the band 11.7-12.2 GHz;

*c)* that WRC-19 suppressed the limitation in Section 3 Annex **7** of Appendix **30 (Rev.WRC-15)** which determined allowable portions of the orbital arc between 37.2°W and 10°E for new or modified assignments in the band 11.7-12.2 GHz in the Regions 1 and 3 List;

*d)* that Section 1 of Annex 1 to Appendix **30** **(Rev.WRC-15)** provides criteria used for determination of coordination requirements for frequency assignments of Regions 1 & 3 Plan and List;

*e)* that Section 1 of Annex 1 to Appendix **30** **(Rev.WRC-15)**  pfd mask values are based on the parameters adopted by WRC-2000 based on the minimum earth station receiving antenna size of 60 cm;

*f)* that the use of this band by the BSS is subject to coordination procedure of Article 4 of Appendix **30** **(Rev.WRC-19)**,

noting

*a)* that the ITU Radiocommunication Sector (ITU-R) has carried out a significant amount of studies in preparation for conferences on BSS planning, and has developed a number of Reports and Recommendations;

*b)* that within the orbital arc of the geostationary-satellite orbit between 37.2°W and 10°E before WRC-19 there were limitations on the use of some orbital positions for any proposed new or modified assignment in the Regions 1 and 3 List of additional uses in the frequency band 11.7‑12.2 GHz;

*c)* that some networks with earth station receiving antenna size smaller than 60 cm were successfully implemented within the orbital arc mentioned in *noting* b), in view of protection due to the presence of limitations on the use of orbital positions in this orbital arc;

*d)* that with the deletion of orbital position limitations, the protection of satellite assignments mentioned in *noting* *c)* shall be ensured;

*e)* that the geostationary-satellite orbit between 37.2°W and 10°E is widely used by Region 1 BSS and Region 2 FSS networks;

*f)* that equitable access to and efficient use of the 12 GHz frequency range should be encouraged,

resolves

1 that this Resolution is applicable only to implemented[[4]](#footnote-4)1 networks with earth station receiving antenna size smaller than 60 cm (40 cm and 45 cm) as outlined in Annex 1 of this Resolution;

2 that frequency assignments of the networks mentioned in *resolves* 1 above are considered by the Bureau as being affected by a proposed new or modified assignment in the List filed to the GSO orbital positions mentioned in Annex 1 to this Resolution, only if the following conditions specified in Annex 1 of Appendix **30 (Rev.WRC-19)** are met:

– the minimum orbital spacing between the wanted and interfering space stations, under worst-case station-keeping conditions, is less than 9°;

– the reference equivalent downlink protection margin corresponding to at least one of the test-points of that wanted assignment, including cumulative effect of any previous modification to the List or any previous agreement, falls more than 0.45 dB below 0 dB, or if already negative, more than 0.45 dB below that reference equivalent protection margin value;

3 that for cases, when a proposed new assignment in the List is filed within the geostationary orbital arc between 37.2°W and 10°E in orbital arc segments that differ from those in Annex 1 to this Resolution, appropriate provisions of Annex 1 Appendix **30 (Rev.WRC-19)** to determine the need for coordination, continue to be applied with respect to relevant frequency assignments of satellite networks mentioned in *resolves* 1.

ANNEX 1 TO draft new RESOLUTION [EUR-A14-LIMITA3] (WRC-19)

Satellite networks and orbital arc segments for which
 this Resolution is applicable

|  |  |
| --- | --- |
| Satellite networks for which this Resolution applies | Orbital arc segments where the conditions specified in *resolves* 2 of this resolution apply |
| Orbital position | Earth station antenna size, cm | Satellite Network | Date of Receipt of Part A submission | Notice Id Part II |
| 33.5ºW | 45 | UKDIGISAT-4C | 09.10.2014 | TBD | 36.0ºW < ≤ 35.36ºW;31.64ºW ≤ < 30.0ºW;29.0ºW <  ≤ 28.58ºW; |
| 30.0ºW | 45 | HISPASAT-1 | 08.02.2000 | 99500256 | 34.92ºW ≤ < 33.5ºW;32.5ºW < ≤ 31.86ºW;28.14ºW ≤ < 26.0ºW; |
| HISPASAT-37A | 19.11.2014 | 117560019 |
| 4.8ºE | 40 | SIRIUS-N-BSS | 17.11.2014 | 118560003 | 0 < ≤ 2.85ºE;6.75ºE ≤ < 9.0ºE;9ºE < ≤ 10ºE; |
| Where  is the orbital position within the orbital segment defined in the table above. |

*Note: Currently, the proposed table contains all possible satellite networks that could comply with the conditions specified in resolves 1). WRC-19 will update this table to reflect the satellite networks that in fact comply with these conditions.*

ADD EUR/XXXA4/10

Draft New Resolution [EUR-A14-PRIORITY](WRC-19)

Additional temporary regulatory measures following deletion of part of Annex 7 of Appendix 30 by WRC-19

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

considering

*a)* that some national assignments especially those of developing countries in the Regions 1 and 3 Plan have equivalent downlink protection margin values in the Appendix **30** equal or below -10 dB;

*b)* that implementation of a national assignment in the Regions 1 and 3 Plan with an equivalent downlink protection margin equal or below -10 dB would be difficult;

*c)* that any modification of orbital position and other parameters of a national assignment in the Appendix **30** Plan would require a corresponding modification of the orbital position and other parameters in the Appendix **30A** feeder link Plan,

recognizing

*a)* that Article 44 of the ITU Constitution stipulates that: *“In using frequency bands for radio services, Member States shall bear in mind that radio frequencies and any associated orbits, including the geostationary-satellite orbit, are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have equitable access to those orbits and frequencies, taking account the special needs of the developing countries and the geographical situation of particular countries”*;

*b)* that Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference, ITU includes the ITU strategic plan for 2016-2019, which contains, as one of the strategic objectives of ITU‑R: *“Meet, in a rational, equitable, efficient, economical and timely way, the ITU membership’s requirements for radio-frequency spectrum and satellite-orbit resources, while avoiding harmful interference”*,

resolves

1 that as of the “*date of entry into force of this Resolution”* and for a period of 90 *(this period is only indicative)* days, the special procedure outlined in the Attachment to this Resolution shall be applied in respect of submissions of Regions 1 and 3 administrations meeting the specified requirements in § 1 of the Attachment;

2 that as of the “*date of* *entry into force of this Resolution*” and for a period of 90 *(this period depends on decision on resolves 1)* days, submissions under § 4.1.3 of Appendices **30** and **30A** in Regions 1 and 3 not meeting the specified requirements in § 1 of the Attachment to Resolution at an orbital position of orbital arcs for which the Annex 7 of Appendix **30 (WRC-15)** limitations were suppressed by WRC-19 shall be considered as received by the BR on the “*date of* *entry into force of this Resolution*” + 91 days,

instructs the Director of the Radiocommunication Bureau

to identify the administrations that meet the conditions of section 1 of the attachment to this Resolution and inform these administrations accordingly.

ATTACHMENT TO DRAFT NEW RESOLUTION [EUR-A14-PRIORITY] (WRC‑19)

Additional temporary regulatory measures following deletion of part of Annex 7 of Appendix 30 by WRC-19

1 The special procedure described in this attachment can only be applied once by an administration with:

*a)* no frequency assignments included in the List or for which complete Appendix **4** information has been received by the Bureau in accordance with the provision of § 4.1.3 of Appendix **30**; and

*b)* an assignment in the Regions 1 and 3 Plan of Appendix **30** when the equivalent downlink protection margin (EPM) value corresponding to a test point of its national assignment in the Regions 1 and 3 Plan is equal or below -10 dB for at least 50% of the total number of EPM values of the assignment in the Regions 1 and 3 Plan in Appendix **30**.

2 Administrations seeking to apply this special procedure shall submit their request to the Bureau, with the information specified in § 4.1.3 of Appendices **30** and **30A**, in particular this information shall include:

*a)* In the cover letter to the Bureau, the information that the administration requests the use of this special procedure together with the name of the Plan assignments for which condition defined in § 1 above is met;

*b)* a service area is limited to the national territory as defined in the GIMS software application;

*c)* a set of maximum 20 test points inside the national territory;

*d)* a minimal ellipse determined by the set of test points submitted in c) above. An Administration may request the Bureau to create such diagram;

*e)* maximum 10 channels for a Region 1 administration or 12 channels for a Region 3 administration with a bandwidth of 27 MHz;

*f)* a corresponding submission for the Appendix **30A** feeder-link Plan in compliance with items *b),c),* *d)* and *e)* above,

3 Upon receipt of the complete information from an administration sent under § 3 above, the Bureau shall process the submissions in date order in accordance with Article 4 of Appendices **30** and **30A**;

4 The notifying Administration shall request the subsequent WRCs to consider the inclusion in the Appendices **30** and **30A** Plans as a replacement of its national assignments appearing in the Plans, pursuant to paragraph 4.1.27 of Article 4 of Appendices **30** and **30A**.

ADD EUR/XXXA4/11

DRAFT NEW RESOLUTION [EUR-A14-ENTRY-INTO-FORCE] (WRC‑19)

Provisional application of certain provisions of the Radio Regulations as revised by the 2019 World Radiocommunication Conference

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

considering

*a)* that this conference has, in accordance with its terms of reference, adopted a partial revision to the Radio Regulations (RR), which will enter into force on 1 January 2021;

*b)* that some of the provisions, as amended by this conference, need to apply provisionally before that date;

*c)* that, as a general rule, new and revised Resolutions and Recommendations enter into force at the time of the signing of the Final Acts of a conference;

resolves

that, as of 23 November 2019, the following provisions of the RR, as revised or established by this conference, shall provisionally apply: Annex 7 to Appendix 30;

SUP EUR/XXXA4/12

RESOLUTION 557 (WRC-15)

Consideration of possible revision of Annex 7 to
Appendix 30 of the Radio Regulations

**END OF OPTION 1 (METHOD B OF THE DRAFT CPM TEXT)**

**OPTION 2 (METHOD C OF THE DRAFT CPM TEXT)**

ARTICLE 59

Entry into force and provisional application
of the Radio Regulations    (WRC‑12)

ADD EUR/XXXA4/1

59.15 The other provisions of these Regulations, as revised by WRC‑19, shall enter into force on 1 January 2021, with the following exceptions:    (WRC‑19)

ADD EUR/XXXA4/2

59.16 – the revised provisions for which other effective dates of application are stipulated in Resolution **[EUR-A14-ENTRY-INTO-FORCE] (WRC‑19)**    (WRC‑19)

APPENDIX 30 (REV.WRC‑15)[[5]](#footnote-5)\*

Provisions for all services and associated Plans and List[[6]](#footnote-6)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)

MOD EUR/XXXA4/3

ANNEX 7     (Rev.WRC‑19)

Orbital position limitationsADD [[7]](#footnote-7)YY, ADD [[8]](#footnote-8)ZZ

MOD EUR/XXXA4/4

1) No broadcasting satellite serving an area in Region 1 and using a frequency in the band 11.7-12.2 GHz shall occupy a nominal orbital position further east than 146° E.

MOD EUR/XXXA4/5

2) No broadcasting satellite serving an area in Region 2 that involves an orbital position different from that contained in the Region 2 Plan shall occupy a nominal orbital position:

 further west than 175.2° W in the band 12.2-12.7 GHz.

 However, modifications necessary to resolve possible incompatibilities during the incorporation of the Regions 1 and 3 feeder-link Plan into the Radio Regulations shall be permitted.

SUP EUR/XXXA4/6

3) The purpose of the following orbital position and e.i.r.p. limitations is to preserve access to the geostationary-satellite orbit by the Region 2 fixed-satellite service in the band 11.7‑12.2 GHz. Within the orbital arc of the geostationary-satellite orbit between 37.2° W and 10° E, the orbital position associated with any proposed new or modified assignment in the Regions 1 and 3 List of additional uses shall lie within one of the portions of the orbital arc listed in Table 1. The e.i.r.p. of such assignments shall not exceed 56 dBW, except at the positions listed in Table 2.

**Reasons:**

SUP EUR/XXXA4/7

TABLE 1

Allowable portions of the orbital arc between 37.2°W and 10° E for new or modified
assignments in the Regions 1 and 3 Plan and List

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Orbital position** | 37.2° W to36° W | 33.5°Wto32.5° W | 30° Wto29° W | 26° Wto24° W | 20° Wto18° W | 14° W to12° W | 8° W to6° W | 4° W 1 | 2° W to0° | 4° Eto6° E | 9° E 1 |
| 1 Proposed new or modified assignments in the List which involve this orbital position shall not exceed the power flux-density limit −138 dB(W/(m2 · 27 MHz)) at any point in Region 2. |

SUP EUR/XXXA4/8

TABLE 2

Nominal positions in the orbital arc between 37.2° W and 10° E at which the
e.i.r.p. may exceed the limit of 56 dBW

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Orbital position** | 37° W± 0.2° | 33.5° W | 30° W | 25° W ± 0.2° | 19° W ± 0.2° | 13° W ± 0.2° | 7° W ± 0.2° | 4° W 1 | 1° W ± 0.2° | 5° E ± 0.2° | 9° E 1 |
| 1 Proposed new or modified assignments in the List which involve this orbital position shall not exceed the power flux-density limit –138 dB(W/(m2 · 27 MHz)) at any point in Region 2. |

NOC

B The Region 2 Plan is based on the grouping of the space stations in nominal orbital positions of ±0.2° from the centre of the cluster of satellites. Administrations may locate those satellites within a cluster at any orbital position within that cluster, provided they obtain the agreement of administrations having assignments to space stations in the same cluster. (See § 4.13.1 of Annex 3 to Appendix **30A**.)

ADD EUR/XXXA4/9

Draft New Resolution [EUR-A14-LIMITA3](WRC-19)

Protection of implemented BSS networks in the orbital arc of the geostationary‑satellite orbit between 37.2°W and 10°E
in the band 11.7-12.2 GHz

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

considering

*a)* that the provisions applying to the broadcasting-satellite service (BSS) in the frequency bands 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 are contained in Appendix **30**;

*b)* that systems in the fixed satellite service (FSS) and the broadcasting satellite service share the band 11.7-12.2 GHz;

*c)* that WRC-19 suppressed the limitation in Section 3 Annex 7 of Appendix **30 (Rev.WRC-15)** which determined allowable portions of the orbital arc between 37.2°W and 10°E for new or modified assignments in the band 11.7-12.2 GHz in the Regions 1 and 3 List;

*d)* that Section 1 of Annex 1 to Appendix **30** **(Rev.WRC-15)** provides criteria used for determination of coordination requirements for frequency assignments of Regions 1 & 3 Plan and List;

*e)* that Section 1 of Annex 1 to Appendix **30 (Rev.WRC-15)** pfd mask values are based on the parameters adopted by WRC-2000 based on the minimum earth station receiving antenna size of 60 cm;

*f)* that the use of this band by the BSS is subject to coordination procedure of Article 4 of Appendix **30 (Rev.WRC-19)**,

noting

*a)* that the ITU Radiocommunication Sector (ITU-R) has carried out a significant amount of studies in preparation for conferences on BSS planning, and has developed a number of Reports and Recommendations;

*b)* that within the orbital arc of the geostationary-satellite orbit between 37.2°W and 10°E before WRC-19 there were limitations on the use of some orbital positions for any proposed new or modified assignment in the Regions 1 and 3 List of additional uses in the frequency band 11.7‑12.2 GHz;

c) that some networks with earth station receiving antenna size smaller than 60 cm were successfully implemented within the orbital arc mentioned in *noting* b), in view of protection due to the presence of limitations on the use of orbital positions in this orbital arc;

*d)* that with the deletion of orbital position limitations, the protection of satellite assignments mentioned in *noting* c) shall be ensured;

*e)* that the geostationary-satellite orbit between 37.2°W and 10°E is widely used by Region 1 BSS and Region 2 FSS networks;

*f)* that equitable access to and efficient use of the 12 GHz frequency range should be encouraged,

resolves

1 that this Resolution is applicable only to implemented[[9]](#footnote-9)1 networks with earth station receiving antenna size smaller than 60 cm (40 cm and 45 cm) as outlined in Annex 1 of this Resolution;

2 that frequency assignments of the networks mentioned in *resolves* 1 above are considered by the Bureau as being affected by a proposed new or modified assignment in the List filed to the GSO orbital positions mentioned in Annex 1 to this Resolution, only if the following conditions specified in Annex 1 of Appendix **30** **(Rev.WRC-19)** are met:

– the minimum orbital spacing between the wanted and interfering space stations, under worst-case station-keeping conditions, is less than 9°;

– the reference equivalent downlink protection margin corresponding to at least one of the test-points of that wanted assignment, including cumulative effect of any previous modification to the List or any previous agreement, falls more than 0.45 dB below 0 dB, or if already negative, more than 0.45 dB below that reference equivalent protection margin value;

3 that for cases, when a proposed new assignment in the List is filed within the geostationary orbital arc between 37.2°W and 10°E in orbital arc segments that differ from those in Annex 1 to this Resolution, appropriate provisions of Annex 1 Appendix **30** **(Rev.WRC-19)** to determine the need for coordination, continue to be applied with respect to relevant frequency assignments of satellite networks mentioned in *resolves* 1.

ANNEX 1 TO draft new RESOLUTION [EUR-A14-LIMITA3] (WRC-19)

Satellite networks and orbital arc segments for which this
 Resolution is applicable

|  |  |
| --- | --- |
| Satellite networks for which this Resolution applies | Orbital arc segments where the conditions specified in *resolves* 2 of this resolution apply |
| Orbital position | Earth station antenna size, cm | Satellite Network | Date of Receipt of Part A submission | Notice Id Part II |
| 33.5ºW | 45 | UKDIGISAT-4C | 09.10.2014 | TBD | 36.0ºW < ≤ 35.36ºW;31.64ºW ≤ < 30.0ºW;29.0ºW <  ≤ 28.58ºW; |
| 30.0ºW | 45 | HISPASAT-1 | 08.02.2000 | 99500256 | 34.92ºW ≤ < 33.5ºW;32.5ºW < ≤ 31.86ºW;28.14ºW ≤ < 26.0ºW; |
| HISPASAT-37A | 19.11.2014 | 117560019 |
| 4.8ºE | 40 | SIRIUS-N-BSS | 17.11.2014 | 118560003 | 0 < ≤ 2.85ºE;6.75ºE ≤ < 9.0ºE;9ºE < ≤ 10ºE; |
| Where  is the orbital position within the orbital segment defined in the table above. |

*Note: Currently, the proposed table contains all possible satellite networks that could comply with the conditions specified in resolves 1). WRC-19 will update this table to reflect the satellite networks that in fact comply with these conditions.*

ADD EUR/XXXA4/10

Draft New Resolution [EUR-A14-PRIORITY](WRC-19)

Additional temporary regulatory measures following deletion
of part of Annex 7 of Appendix 30 by WRC-19

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

considering

*a)* that some national assignments especially those of developing countries in the Regions 1 and 3 Plan have equivalent downlink protection margin values in the RR Appendix **30** equal or below -10 dB;

*b)* that implementation of a national assignment in the Regions 1 and 3 Plan with an equivalent downlink protection margin equal or below -10 dB would be difficult;

*c)* that any modification of orbital position and other parameters of a national assignment in the Appendix **30** Plan would require a corresponding modification of the orbital position and other parameters in the Appendix **30A** feeder link Plan,

recognizing

*a)* that Article 44 of the ITU Constitution stipulates that: *“In using frequency bands for radio services, Member States shall bear in mind that radio frequencies and any associated orbits, including the geostationary-satellite orbit, are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have equitable access to those orbits and frequencies, taking account the special needs of the developing countries and the geographical situation of particular countries”*;

*b)* that Resolution 71 (Rev. Busan, 2014) of the Plenipotentiary Conference, ITU includes the ITU strategic plan for 2016-2019, which contains, as one of the strategic objectives of ITU‑R: *“Meet, in a rational, equitable, efficient, economical and timely way, the ITU membership’s requirements for radio-frequency spectrum and satellite-orbit resources, while avoiding harmful interference”*,

resolves

1 that as of the “date of entry into force of this Resolution” and for a period of 90 (this period is only indicative) days, the special procedure outlined in the Attachment to this Resolution shall be applied in respect of submissions of Regions 1 and 3 administrations meeting the specified requirements in § 1 of the Attachment;

2 that as of the “date of entry into force of this Resolution” and for a period of 90 (this period depends on decision on resolves 1) days, submissions under § 4.1.3 of Appendices **30** and **30A** in Regions 1 and 3 not meeting the specified requirements in § 1 of the Attachment to Resolution at an orbital position of orbital arcs for which the Annex 7 of Appendix **30 (WRC-15)** limitations were suppressed by WRC-19 shall be considered as received by the BR on the “date of entry into force of this Resolution” + 91 days.

instructs the Director of the Radiocommunication Bureau

to identify the administrations that meet the conditions of section 1 of the attachment to this Resolution and inform these administrations accordingly.

ATTACHMENT TO DRAFT NEW RESOLUTION [EUR-A14-PRIORITY] (WRC‑19)

Additional temporary regulatory measures following deletion of part
of Annex 7 of Appendix 30 by WRC-19

1 The special procedure described in this attachment can only be applied once by an administration with:

*a)* no frequency assignments included in the List or for which complete Appendix **4** information has been received by the Bureau in accordance with the provision of § 4.1.3 of Appendix **30**; and

*b)* an assignment in the Regions 1 and 3 Plan of Appendix **30** when the equivalent downlink protection margin (EPM) value corresponding to a test point of its national assignment in the Regions 1 and 3 Plan is equal or below -10 dB for at least 50% of the total number of EPM values of the assignment in the Regions 1 and 3 Plan in Appendix **30**;

2 Administrations seeking to apply this special procedure shall submit their request to the Bureau, with the information specified in § 4.1.3 of Appendices **30** and **30A**, in particular this information shall include:

*a)* In the cover letter to the Bureau, the information that the administration requests the use of this special procedure together with the name of the Plan assignments for which condition defined in § 1 above is met;

*b)* a service area is limited to the national territory as defined in the GIMS software application;

*c)* a set of maximum 20 test points inside the national territory;

*d)* a minimal ellipse determined by the set of test points submitted in c) above. An Administration may request the Bureau to create such diagram;

*e)* maximum 10 channels for a Region 1 administration or 12 channels for a Region 3 administration with a bandwidth of 27 MHz;

*f)* a corresponding submission for the Appendix **30A** feeder-link Plan in compliance with items *b),c),* *d)* and *e)* above;

3 Upon receipt of the complete information from an administration sent under § 3 above, the Bureau shall process the submissions in date order in accordance with Article 4 of Appendices **30** and **30A**;

4 The notifying Administration shall request the subsequent WRCs to consider the inclusion in the Appendices **30** and **30A** Plans as a replacement of its national assignments appearing in the Plans, pursuant to paragraph 4.1.27 of Article 4 of Appendices **30** and **30A**.

ADD EUR/XXXA4/11

Draft New Resolution [EUR-A14-LIMITA1A2](WRC-19)

Need for coordination of Region 2 FSS networks in the frequency band 11.7‑12.2 GHz with respect to the Region 1 BSS assignments located
further west than 37.2W and of Region 1 FSS networks in the
frequency band 12.5-12.7 GHz with respect to the Region 2
BSS assignments located further east than 54W

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

considering

*a)* that WRC-15 decided to conduct studies on, review, and identify possible revisions to, if necessary, the limitations mentioned in Annex 7 to Appendix **30 (Rev.WRC-15)**, while ensuring the protection of, and without imposing additional constraints on, assignments in the Plan and in the List and the future of broadcasting-satellite service (BSS) networks and existing fixed-satellite service (FSS) networks;

*b)* that the provisions applying to the frequency assignments of BSS in the frequency bands 11.7-12.5 GHz in Region 1 and 12.2-12.7 GHz in Region 2 are contained in Appendix **30**;

*c)* that the FSS has primary allocations in the frequency bands 12.5-12.75 GHz in Region 1 and 11.7-12.2 GHz in Region 2;

*d)* that WRC-19 suppressed the limitation in Annex **7** of Appendix **30** that prevented broadcasting satellites serving an area in Region 1 and using frequency assignments in the band 11.7-12.2 GHz at orbital positions further west than 37.2°W;

*e)* that WRC-19 suppressed the limitation in Annex **7** of Appendix **30** that prevented broadcasting satellites serving an area in Region 2 and using frequency assignments in the band 12.5-12.7 GHz at orbital positions further east than 54°W;

*f)* that the result of those suppressions shall ensure the protection of, and cannot impose additional constraints on, assignments in the Plan and the List and the future development of the BSS within the Plan, and existing and future FSS networks,

recognizing

*a)* that existing FSS networks operating in the frequency bands mentioned in *considering c)* and BSS frequency assignments in the Plan and List implemented in accordance with the provisions of Annex 7 to Appendix **30 (Rev.WRC-15)** prior to WRC-19 shall continue to be protected;

*b)* that the frequency bands 11.7-12.5 GHz in Region 1 and 12.2-12.7 GHz in Region 2 are widely used by BSS networks, subject to the provisions of Annex 7 to Appendix **30** **(Rev.WRC-15)** prior to WRC-19;

*c)* that the frequency bands 12.5-12.75 GHz in Region 1 and 11.7-12.2 GHz in Region 2 are widely used by FSS networks,

resolves

1 that, with respect to § 7.1 a), 7.2.1 b) and 7.2.1 c) of Article 7 of Appendix **30**, for identification of the need for coordination of a transmitting space station in the fixed-satellite service (FSS) (space-to-Earth) of Region 2 with Region 1 BSS frequency assignments and using a frequency assignment in the band 11.7-12.2 GHz with an orbital position further west than 37.2°W, the conditions contained in Annex 4 to Appendix **30** are replaced by the conditions in Annex 1 to this Resolution;

2 that, with respect to § 7.1 a), 7.2.1 b) and 7.2.1 c) of Article 7 of Appendix **30**, for identification of the need for coordination of a transmitting space station in the fixed-satellite service(FSS) (space-to-Earth) of Region 1 with Region 2 BSS frequency assignments and using a frequency assignment in the band 12.5-12.7 GHz with an orbital position further east than 54°W and not within its clusters in the Region 2 Plan of Appendix **30**, the conditions contained in Annex 4 to Appendix **30** are replaced by the conditions in Annex 2 to this Resolution.

ANNEX 1 TO draft new RESOLUTION [EUR-A14-LIMITA1A2] (WRC-19)

With respect to § 7.1 *a)*, 7.2.1 *b)* and 7.2.1 *c)* of Article 7 of Appendix **30**, coordination of a transmitting space station in the fixed-satellite service (FSS) (space-to-Earth) of Region 2 is required with a broadcasting satellite serving an area in Region 1 and using a frequency assignment in the band 11.7-12.2 GHz with a nominal orbital position further west than 37.2°W when, under assumed free-space propagation conditions, the power flux-density at any test point of its service area of the overlapping frequency assignments in the BSS exceeds the following values: (WRC-19)

–147 dB(W/(m2 .27 MHz)) for 0°<<0.23°

–135.7 + 17.74 log dB (W/(m2.27 MHz)) for 0.23°<< 2.0°

–136.7+ 1.662dB(W/(m2.27 MHz)) for 2.0°<<3.59°

–129.2 + 25 log dB(W/(m2.27 MHz)) for 3.59°<<10.57°

–103.6 dB(W/(m2.27 MHz)) for 10.57°<

where  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.

ANNEX 2 TO draft new RESOLUTION [EUR-A14-LIMITA1A2] (WRC-19)

With respect to § 7.1 *a)*, 7.2.1 *b)* and 7.2.1 *c)* of Article 7 of Appendix **30**, coordination of a transmitting space station in the fixed-satellite service (FSS) (space-to-Earth) of Region 1 is required with a broadcasting satellite serving an area in Region 2 and using a frequency assignment in the band 12.5-12.7 GHz with a nominal orbital position further east than 54°W when, under assumed free-space propagation conditions, the power flux-density at any test point of its service area of the overlapping frequency assignments in the BSS exceeds the following values: (WRC-19)

–147 dB(W/(m2 .27 MHz)) for 0°<<0.23°

–135.7 +17.74 log dB (W/(m2.27 MHz)) for 0.23°<<1.8°

–134.0 + 0.89 2dB(W/(m2.27 MHz)) for 1.8°<<5.0°

–129.2 + 25 log dB(W/(m2.27 MHz)) for 5.0°<<10.57°

–103.6 dB(W/(m2.27 MHz)) for 10.57°<

where  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.

ADD EUR/XXXA4/12

DRAFT NEW RESOLUTION [EUR-A14-ENTRY-INTO-FORCE] (WRC‑19)

Provisional application of certain provisions of the Radio Regulations as revised by the 2019 World Radiocommunication Conference

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

considering

*a)* that this conference has, in accordance with its terms of reference, adopted a partial revision to the Radio Regulations (RR), which will enter into force on 1 January 2021;

*b)* that some of the provisions, as amended by this conference, need to apply provisionally before that date;

*c)* that, as a general rule, new and revised Resolutions and Recommendations enter into force at the time of the signing of the Final Acts of a conference;

resolves

that, as of 23 November 2019, the following provisions of the RR, as revised or established by this conference, shall provisionally apply: Annex **7** to Appendix **30**;

SUP EUR/XXXA4/13

RESOLUTION 557 (WRC-15)

Consideration of possible revision of Annex 7 to
Appendix 30 of the Radio Regulations

**END OF OPTION 2 (METHOD C OF THE DRAFT CPM TEXT)**

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

1. \* 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-1)
2. 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-2)
3. YY See draft new Resolution **[EUR-A14-LIMITA3] (WRC-19).** [↑](#footnote-ref-3)
4. 1 For the avoidance of doubt, the “implemented” networks referred to are related to Regions 1 and 3 BSS networks in the orbital arc 37.2°W and 10°E:

− for which complete Appendix **4** information had been received by the Bureau under § 4.1.3 of Appendix **30** prior to 28 November 2015; and

− for which complete Appendix **4** information had been received by the Bureau under § 4.1.12 of Appendix **30** prior to 23 November 2019; 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 23 November 2019; and

− for which complete Appendix **4** information had been received by the Bureau under § 5.1.2 of Appendix **30** prior to 23 November 2019; and

− brought into use, and for which the date of bringing into use has been confirmed to the Bureau before 23 November 2019. [↑](#footnote-ref-4)
5. \* 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-5)
6. 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-6)
7. YY See draft new Resolution **[EUR-A14-LIMITA3] (WRC-19)**. [↑](#footnote-ref-7)
8. ZZ Broadcasting satellites serving an area in Region 1 using a frequency in the band 11.7-12.2 GHz and occupying a nominal orbital position further west than 37.2°W and in Region 2 using a frequency in the band 12.5-12.7 GHz and occupying a nominal orbital position furthereast than 54°W shall be in accordance with draft new Resolution **[EUR-A14-LIMITA1A2] (WRC-19)**. [↑](#footnote-ref-8)
9. 1 For the avoidance of doubt, the “implemented” networks referred to are related to Regions 1 & 3 BSS networks in the orbital arc 37.2°W and 10°E:

− for which complete Appendix **4** information had been received by the Bureau under § 4.1.3 of Appendix **30** prior to 28 November 2015; and

− for which complete Appendix **4** information had been received by the Bureau under § 4.1.12 of Appendix **30** prior to 23 November 2019; 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 23 November 2019; and

− for which complete Appendix **4** information had been received by the Bureau under § 5.1.2 of Appendix **30** prior to 23 November 2019; and

− brought into use, and for which the date of bringing into use has been confirmed to the Bureau before 23 November 2019. [↑](#footnote-ref-9)