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| Summary:  |
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| Proposal: |
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DRAFT CEPT BRIEF ON AGENDA ITEM 7

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) to facilitate rational, efficient, and economical use of radio frequencies and any associated orbits, including the geostationary‑satellite orbit.

# ISSUE

Resolution 86 (Rev. WRC-07) “Implementation of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference”

resolves to invite future WRCs

1. to consider any proposals which deal with deficiencies and improvements in the advance publication, coordination, notification and recording procedures of the Radio Regulations for frequency assignments pertaining to space services which have either been identified by the Board and included in the Rules of Procedure or which have been identified by administrations or by the Radiocommunication Bureau, as appropriate;
2. to ensure that these procedures and the related appendices of the Radio Regulations reflect the latest technologies, as far as possible, and invites administrations to consider, in preparing for PP-10, appropriate action with regard to Resolution 86 (Rev. Marrakesh, 2002).

# Preliminary overall CEPT position

CEPT is studying possible improvements of the coordination and notification procedures for space services. CEPT supports retaining the current process of continuing evolution at successive WRCs of the regime governing space services. CEPT intends to develop specific positions susceptible to bring improvement to the regulatory process.

CEPT favours the review of any RR provision which can bring accurate solutions to specific detected inconsistencies and develop new improved provisions with emphasis on solving the most urgent issues, i.e. well characterized issues whose improvement is urgent and impacting.

CEPT also favours a stable and predictable regulatory framework for efficient and economical use of spectrum and orbit resources.

CEPT supports to include into consideration under WRC agenda item 7 only the issues considered by the relevant Working Parties prior to the deadline for the draft CPM Report and included into the draft CPM Report, in order to give administrations and regional organizations sufficient time to draw up a position and develop regulatory texts.

## CEPT positions on specific issues under Agenda item 7

These may later be divided into two sub-categories for which CEPT is intending to submit ECPs or not.

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| Issue | Title | CEPT position | Annex |
| A | Bringing into use of frequency assignments to all non-GSO satellite systems, and consideration of a milestone-based approach for the deployment of non-GSO satellite systems in specific bands and services | CEPT supports that a solution to address this issue should follow the principles established by ITU-R WP 4A ([Annex 30](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N30%21MSW-E.docx) of 4A/826, Section 3/7/1.3).CEPT supports that the definition of the BIU of frequency assignments to non-GSO systems in accordance with the current practice as contained in then RoP adopted by the 73rd meeting of the RRB to be left unchanged from the current practice. This means that CEPT supports considering that the frequency assignments to a non-GSO system be brought into use with the deployment of one of its satellites in one of the notified orbital planes with the operational capability of transmitting or receiving those frequency assignments. Further consideration needs to be given on the most appropriate length of the period during which such satellite needs to operate in one of the notified orbital planes of the non-GSO system. At the same time, CEPT supports a milestone-based approach for the maintenance of the recording in the MIFR of assignments to non-GSO systems associated with a minimum number of satellites to be deployed over time. In assessing milestone timelines and objectives, CEPT will seek a balance between the need to prevent spectrum warehousing, the proper functioning of coordination mechanisms and the operational requirements related to the deployment of a non-GSO satellite system. CEPT supports that any milestone-based approach should be applicable to FSS/BSS/MSS in at least the frequency bands 10.7-13.25, 13.75-14.5, 17.3-21.2, 27-31, 37.5-47, 47.2-50.2 and 50.4-51.4 GHz.and is considering its applicability to other primary satellite services in the same direction and same frequency bands. CEPT believes that the milestone-based proposal gives regulatory certainty to networks and systems and gives recognition that constellations of non-GSO satellites may generally take time to be fully deployed. CEPT supports the adoption of a unique method encompassing all types of constellations.CEPT supports three milestones to be applied to networks recorded in the MIFR. Recognizing that some constellations may deploy some satellites but may fail to meet the milestones, a provision is proposed to reduce the number of satellites recorded in the MIFR while preserving the rights for the already in-orbit satellites. The reduction of the characteristics of the constellation recorded in the MIFR should be based on the number of actual satellites launched.In the absence of a ITU-R recommendation dealing with calculation for interference as a result of modification, CEPT supports the non-application of No. 11,43B if modifications to notified orbital parameters, following milestone failure, are limited to the reduction of the number of orbital planes, reduction of the number of satellites per plane, modification of the right ascension of the ascending node of each plane and the modification of the initial phase angle of each satellite provided that notifying administration submit a commitment stating that the modified characteristics shall not cause more interference or require more protection than the initial notified characteristics. CEPT supports that those systems brought into use and notified, but not fully deployed before a date to be set by the Conference, will have the same regulatory certainty as that available to those systems which will be brought into use and notified after this date. CEPT supports a methodology that would ensure that at one point in time after WRC-19, the recorded frequency assignments and their associated characteristics must reflect the actual deployment of such systems. Appropriate transitional measures are needed in order to allow administrations having systems brought into use and notified before a date to be set by the Conference to have sufficient time to adapt their current development and deployment schedules to meet milestones after an appropriate date after WRC-19. CEPT supports that the suspension of frequency assignments does not extend the milestone period nor reduce the requirements associated with any of the remaining milestones.CEPT will study further whether provisions should be developed so as to avoid that the same space station may be used to gain undue advantage in the deployment of the constellation by bringing into use multiple filings.CEPT supports the adoption of a new Resolution by WRC-19 based on the principles and methodology set out above to address this issue. | [1](#_ISSUE) |
| B | Application of coordination arc in the Ka-band, to determine coordination requirements between FSS and other satellite services | CEPT supports to apply the coordination arc to both MSS primary and secondary frequency assignments without modifying the current conditions related to the category of allocation applicable to assignments to be taken into account in coordination. Coordination arc criteria would substitute the ΔT/T>6% criteria that currently applies, improving and making more efficient the coordination procedures, while keeping the possibility for Administrations to request ΔT/T criteria under No 9.41. CEPT supports adequate modifications to Table 5-1 of RR Appendix 5 to implement this proposal, as outlined in Method B2 in the draft CPM text. | [2](#_ISSUE_B) |
| C | Issues for which consensus was achieved in ITU-R and a single method has been identified* C1: AR11 and AP30/30A/30B discrepancies
* C2: Frequency bands submitted under AP30B Article 6
* C3: AP30B MOD to Article 6 No. 6.10
* C4: AP30/30A single AP4 notice for List and Notification
* C5: MOD to No. 11.46 and six month resubmission
* C6: AP30B single AP4 notice for List and Notification
* C7: harmonization of AP30B with AP30 & 30A § 4.1.13 for R1 & 3 and § 4.2.17 for R2; re-introducing a regulatory option to capture obtaining agreements for a specific period
 | CEPT supports the consensus achieved at ITU-R level. | [3](#_ISSUE_C) |
| D | Identification of those specific satellite networks and systems with which Coordination needs to be effected under RR Nos 9.12, 9.12A and 9.13 | СEPT proposes that the Bureau publish in the CR/D special section the “definitive lists” of those specific GSO networks or non-GSO systems, as appropriate, with which coordination under Nos 9.12, 9.12A or 9.13 needs to be effected, similarly to what is currently done under the provisions of No 9.36.2, as outlined in Method D2 in the draft CPM text.CEPT understands that, once the relevant software currently used by the Bureau will be amended as needed, such an approach would not significantly increase the daily workload of the Bureau for producing such lists. In fact, the Bureau carries out a similar analysis to produce the list of Administrations currently published in the BR IFIC under the provisions of No 9.36.1; the proposed changes would just modify the details published in the BR IFIC, together with simplifying the administrative burden currently born by many Administrations. | [4](#_ISSUE_D) |
| E | Resolution related to RR Appendix 30B  | CEPT supports to pursue a solution that directly addresses the concern for administrations having nothing in the RR Appendix 30B List, to allow these administrations to convert their national allotments into assignments with characteristics outside the envelope of the allotment or make a submission for a new network provided that the assignment are limited to national service and coverage area. CEPT therefore supports the WRC Resolution as contained in the draft CPM text following the philosophy of Resolution 553 (WRC-15) which addresses a similar issue for the 21.4-22 GHz BSS band for Regions 1 and 3, as outlined in the single method. | [5](#_ISSUE_E) |
| F | Measures to facilitate entering new assignments into the RR Appendix 30B List  | CEPT supports to revise and restructure the coordination triggers used in Appendix 30B to take into account technological advances and the development of the use of the geostationary orbit to facilitate access for newcomers by avoiding overprotection and unnecessary coordination requirements, as outlined in Method F1 in the draft CPM text. CEPT believes that this would help to alleviate the difficulties faced by administrations in attempting to enter assignments into the Appendix 30B List and to facilitate coordination of networks, at the same time appropriately protecting the Appendix 30B Plan and List.  | [6](#_ISSUE_F) |
| G | Updating the reference situation for Region 1 and 3 networks under Appendices 30 and 30A when provisionally recorded assignments are converted into definitive recorded assignments | CEPT supports that when a network enters the List under § 4.1.18 of Appendix 30 or 30A while there is still disagreement, the reference situation of the interfered-with network shall only be updated if and when the Bureau is informed by the affected administration to do so. CEPT suggests modifying § 4.1.18bis to reflect this view as outlined in Method G1 in the draft CPM text.  | [7](#_ISSUE_G) |
| H | Modifications to RR Appendix 4 data elements to be provided for non-GSO satellite systems not subject to the procedures of Section II of RR Article 9 | CEPT supports the only method proposed for agenda item 7 Issue H. | [8](#_ISSUE_XX) |
| I | Additional RR Appendix 4 data items to be provided for non-geostationary satellite systems with multiple orbital planes | CEPT supports to further study the impact of this proposal in detail before taking any action. | [9](#_ISSUE_I) |
| J | Modification of Section 1, Annex 1 of RR Appendix 30 pfd limit | CEPT supports to further study the impact of this proposal in detail before taking any action. | [10](#_ISSUE_J) |
| K | Difficulties for Part B examinations under § 4.1.12 or 4.2.16 of RR Appendices 30 and 30A and 6.21 c) of RR Appendix 30B | CEPT supports that the examination under § 4.1.12 or 4.2.16 of RR Appendices 30 and 30A and § 6.21 c) of RR Appendix 30B is performed in two steps, if needed, to better reflect the actual situation and to enable newcomers to benefit from the reduction of satellite networks parameters and characteristics of other networks emerging during the coordination process, and thus increase the efficiency of spectrum use, as outlined in the single method in the draft CPM text.CEPT believes that this method avoids over protection of earlier networks based on part A characteristics which could be obsolete and no longer valid due to changes during the coordination process and in entering into the List (Part B). This method would hence enable spectrum efficiency by addressing potential difficulties encountered by notifying administrations in the Part B examination to enter into the List with favourable findings.CEPT support the overall aim to facilitate entering new assignments into the RR Appendix 30B List and to facilitate coordination of networks for newcomers which the proposal in Issue K targets. | [11](#_ISSUE_K) |
| L | Update to Appendix 4 data elements required for RR Article 22 EPFD verification after revision of Recommendation ITU-R S.1503 | CEPT supports revision of RR Appendix 4 as a consequence to the Recommendation ITU-R S.1503-3 coming into force, as outlined in the single method in the draft CPM text. | [12](#_ISSUE_1) |
| M | Simplified regulatory regime for non-GSO satellite systems with short duration missions  | CEPT supports the regulatory framework in the draft CPM text method where the short lifetimes of non-GSO space stations are taken into account. CEPT proposes to introduce this simplified regulatory regime for the advance publication, notification and recording procedures for non-GSO satellite systems with short duration missions not subject to Section II of RR Article 9 and in that respect supports the principles of the draft new WRC Resolution together with the associated regulatory regime.This regulatory regime for non-GSO satellite systems with short duration missions not subject to Section II of RR Article 9 shall be based on the following principles: * The satellite operator shall stop the emission of the space station in case of harmful interference experienced by current assignments such in line with RR No. 22.1;
* The API and the corresponding notification shall be accurate and complete regarding the orbital parameters and the number of carriers;
* The amount of time of 4 months for comments raised by administrations following a publication of an API shall not be changed;
* The API associated to a limited number of small satellites (maximum of 10) shall be unique, shall not be duplicated or re-used; the maximum duration is 3 years, any extension is prohibited.
 | [13](#_ISSUE_M) |

# Background

In response to Resolution 86 (Rev. Marrakesh, 2002), WRC-03 adopted Resolution 86, which resolved that the scope and criteria of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference to be considered by future WRCs were as follows:

* to consider any proposals which deal with deficiencies in the advance publication, coordination and notification procedures of the Radio Regulations for space services which have either been identified by the Board and included in the Rules of Procedure or which have been identified by administrations or by the Radiocommunication Bureau, as appropriate;
* to consider any proposals which are intended to transform the content of the Rules of Procedure into a regulatory text;
* to ensure that these procedures, characteristics and appendices reflect the latest technologies, as far as possible;
* to consider any proposals intended to facilitate, in accordance with Article 44 of the Constitution, the rational, efficient and economical use of radio frequencies and the associated orbits including the geostationary orbit in accordance with resolves 2 of Resolution 80 (Rev.WRC‑2000) and resolves to request the 2003 and subsequent World Radiocommunication Conferences of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference;
* to consider any changes to provisions of the Radio Regulations for space services that would result in the simplification of the procedures and the work of the Bureau and/or administrations;
* to consider any changes to the Radio Regulations that follow from decisions of a Plenipotentiary Conference on space matters.

WRC-07 considered proposals under the above scope and criteria and also modified Resolution 86 (WRC-03) itself so as to create a standing Agenda item for future WRCs.

WRC-12 amended the title of the Agenda item from the version in the WRC-12 Agenda in order to allow for options other than making changes and to clarify the overall goal of the Agenda item.

WRC-15 didn’t change Agenda item 7. But the ITU-R meeting conditions have changed since the last study period as the Special Committee has been suppressed and the WP 4A meetings have been prolonged. Furthermore, it is suggested that the 1st WP 4A meeting of 2018 preferably was the last meeting to consider identification of additional WRC-19 Agenda item 7 “Issues” and that the 2nd WP 4A meeting of 2018 is thereby dedicated to finalize and agree on the draft CPM text for all WRC-19 Agenda item 7 issues.

Regarding the draft Brief structure, the issues included in the CPM Report to WRC-19 under Agenda item 7 are considered issue by issue in separate Annexes to this Brief. The numbering of issues follows the CPM Report. It should be noted that other issues have also been debated within the ITU-R that have not explicitly being categorised under Agenda item 7.

Regarding the conclusion of CPG19-1 that “The coordinator on Agenda item 7 is invited to suggest her coordination team as appropriate", no formal team has been initiated as of yet, even if support has already been provided by several Administrations.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [4A/826](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21%21MSW-E.docx)– Chairman’s Report of 6th WP 4A meeting, in particular Section 4.3
* [Annex 32](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0675%21N32%21MSW-E.docx) of 4A/675: Work plan, highlighting that it is preferred to consider identification of final additional WRC-19Agenda item 7 “Issues” at the 1st WP 4A meeting of 2018 and that the 2nd WP 4A meeting of 2018 is dedicated to finalize and agree on the draft CPM text for all WRC-19Agenda item 7 issues.
* For the issues A – M, see each Annex 1-13 for relevant documents in each issue, respectively
* [PTB(17)059](https://cept.org/Documents/cpg-pt-b/39680/ptb-17-059_wrc-19-agenda-items-7-91-92) – Russian PTB#5 input contribution: Proposals towards drawing up issues under certain agenda items of World Radiocommunication Conferences, Section 1 addressing agenda item 7

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop preliminary CEPT positions and eventually draft European Common Proposals (ECPs) for the WRC-19 Agenda item 7 issue by issue, as appropriate.

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (21 July 2017)

APT Members support consideration of possible improvements of the advance publication, coordination, notification and recording procedures of satellite networks subject to this Agenda Item in accordance with Resolution 86 (Rev. WRC-07), on the basis that activity under this agenda item is not used to make changes to allocations in Article 5 of the Radio Regulations and associated footnotes of that Article.

ATU (date of proposal)

Arab Group (date of proposal)

CITEL (July 2018)

The 30th meeting of CITEL Permanent Consultative Committee II (PCCII) addressed all items under Agenda Item 7. There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). The outcome was Draft Inter-American Proposals (DIAP) for Issues C1, C5, D and G, a Preliminary Proposal (PP) for Issue E, Preliminary Views (PV) for Issues A, C3, C5, C6, D, E, G, H, and I, and no proposals or views for Issues B, C2, C4, C7 F, J and K. With respect to PPs, DIAPs, and IAPs: there are no proposals for Issues A, C4, C6, C7, E, F, H, J, L and M. There are new (July 2018) PPs for Issues I and K. There are new or revised DIAPs for Issues B, C1, C2, C3, C5, and D. There is an unchanged (from Dec 2017) DIAP for Issue G.

RCC (4 October 2018)

The RCC Administrations consider it necessary further improvements in the notification, coordination and recording procedures for frequency assignments to satellite networks in different services in order to ensure equitable access of ITU Member States to orbital and frequency resource.

## International organisations

IATA (date of proposal)

ICAO (16 September 2016)

No impact on aeronautical services has been identified from WRC-19 Agenda items 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.15, 2, 3, 5, 6, 7, 9.1 (issue 9.1.1), 9.1 (issue 9.1.2), 9.1 (issue 9.1.5), 9.2 and 9.3 which are therefore not addressed in this position.

IMO (date of proposal)

NATO (19 June 2018)

NATO military assessment:

The issues currently being studied under this AI are of no immediate threat to NATO at this time; however, NATO will monitor the issues under study, develop NATO military Assessments and Positions for the issues of interest to NATO, and present a logical defence of its continued use of access and frequency bands covered by this AI should any proposed regulatory actions threaten NATO’s access to satellite resources.

NATO position:

No NATO Position at this stage, however NATO Nations are actively monitoring this issue to assess the potential impact on NATO military usage.

SFCG, ESA (August 2018)

SFCG supports possible changes to the Radio Regulations to improve the handling of the advance publication, coordination, notification and recording procedures for satellite networks. SFCG shall monitor all the issues covered under this agenda item to ensure that any possible change will not adversely impact space science services.

There are currently issues A through N under this Agenda Item. Issues B, C, E through G, I through L, and N do not concern the SFCG. So far SFCG has identified several issues of specific interest to space science services: A, D, H and M.

WMO and EUMETNET (date of proposal)

## Regional organisations

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. Issue A: BRINGING into use of frequency assignments to all non-GSO satellite systems, and consideration of a milestone-based approach for THE deployment of non-GSO satellite systems in specific bands and services

# ISSUE A

Issue A considers the need to change the Radio Regulations related to bringing into use of frequency assignments for non-GSO systems subject to coordination under Section II of Article 9, including consideration of a milestone-based deployment approach for non-GSO FSS satellite systems in certain bands.

# Preliminary CEPT position

CEPT supports that a solution to address this issue should follow the principles established by ITU-R WP 4A ([Annex 30](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N30%21MSW-E.docx) of 4A/826, Section 3/7/1.3).

CEPT supports that the definition of the BIU of frequency assignments to non-GSO systems in accordance with the current practice as contained in then RoP adopted by the 73rd meeting of the RRB to be left unchanged from the current practice. This means that CEPT supports considering that the frequency assignments to a non-GSO system be brought into use with the deployment of one of its satellites in one of the notified orbital planes with the operational capability of transmitting or receiving those frequency assignments. Further consideration needs to be given on the most appropriate length of the period during which such satellite needs to operate in one of the notified orbital planes of the non-GSO system.

At the same time, CEPT supports a milestone-based approach for the maintenance of the recording in the MIFR of assignments to non-GSO systems should be associated with a minimum number of satellites to be deployed over time. In assessing milestone timelines and objectives, CEPT will seek a balance between the need to prevent spectrum warehousing, the proper functioning of coordination mechanisms and the operational requirements related to the deployment of a non-GSO satellite system.

CEPT supports that any milestone-based approach should be applicable to FSS/BSS/MSS in at least the frequency bands 10.7-13.25, 13.75-14.5, 17.3-21.2, 27-31, 37.5-47, 47.2-50.2 and 50.4-51.4 GHz and is considering its applicability to other primary satellite services in the same direction and same frequency bands. CEPT believes that the milestone-based approach gives regulatory certainty to networks and systems and gives recognition that constellations of non-GSO satellites may generally take time to be fully deployed. CEPT supports the adoption of a unique method encompassing all types of constellations.

CEPT supports three milestones to be applied to networks recorded in the MIFR. Recognizing that some constellations may deploy some satellites but may fail to meet the milestones, a provision is proposed to reduce the number of satellites recorded in the MIFR while preserving the rights for the already in-orbit satellites. The reduction of the characteristics of the constellation recorded in the MIFR should be based on the number of actual satellites launched.

In the absence of a ITU-R recommendation dealing with calculation for interference as a result of modification, CEPT supports the non-application of No. 11,43B if modifications to notified orbital parameters, following milestone failure, are limited to the reduction of the number of orbital planes, reduction of the number of satellites per plane, modification of the right ascension of the ascending node of each plane and the modification of the initial phase angle of each satellite provided that notifying administration submit a commitment stating that the modified characteristics shall not cause more interference or require more protection than the initial notified characteristics.

CEPT supports that those systems brought into use and notified, but not fully deployed before a date to be set by the Conference, will have the same regulatory certainty as that available to those systems which will be brought into use and notified after this date. CEPT supports a methodology that would ensure that at one point in time after WRC-19, the recorded frequency assignments and their associated characteristics must reflect the actual deployment of such systems. Appropriate transitional measures are needed in order to allow administrations having systems brought into use and notified before a date to be set by the Conference to have sufficient time to adapt their current development and deployment schedules to meet milestones after an appropriate date after WRC-19.

CEPT supports that the suspension of frequency assignments does not extend the milestone period nor reduce the requirements associated with any of the remaining milestones.

CEPT will study further whether provisions should be developed so as to avoid that the same space station may be used to gain undue advantage in the deployment of the constellation by bringing into use multiple filings.

CEPT supports the adoption of a new Resolution by WRC-19 based on the principles and methodology set out above to address this issue.

# Background

Currently, BIU of frequency assignments to a space station of a satellite network is regulated by the provisions of No 11.44. As a practice of the Bureau a frequency assignment to a non-GSO satellite system is considered as having been brought into use when a single satellite with the capability of transmitting or receiving that frequency assignment has been deployed on one of the notified orbital planes, irrespective of the number of satellites and orbital planes in the satellite system constellation. A continuous period of at least ninety days of operation of that satellite is considered necessary to confirm the BIU. The notifying administration shall so inform the Bureau within thirty days from the end of the ninety-day period.

A frequency assignment to a space station of a non-geostationary satellite system with a notified date of bringing into use more than 120 days prior to the date of receipt of the notification information shall also be considered as having been brought into use if the notifying administration confirms, when submitting the notification information for this assignment, that at least one space station with the capability of transmitting or receiving that frequency assignment has been deployed on one of the notified orbital planes of the non-GSO satellite system and maintained for a continuous period of time from the notified date of bringing into use until the date of receipt of the notification information for this frequency assignment. The date of deployment of the first satellite at its intended orbit shall be within the seven-year time limit for bringing frequency assignments to a space station into use under No 11.44.

To avoid uncertainties with regards to this current practice by the Bureau before any WRC-19 decisions can be implemented, this was clarified in the Rules of Procedures on No 11.44 as amended at the 74th meeting of the Radio Regulations Board in October 2016. The Rules of Procedure which was adopted by the RRB concerns only FSS and MSS satellite networks.

The BR Director brought to the attention of the WRC-15 in his Report that the conference may wish to consider re-defining the notion of BIU for non-GSO satellite systems as this could lead to spectrum warehousing and resurgence of so-called “paper satellite networks”. He also noted that a possible approach could be, for example, a phased approach with milestones based on either one satellite or a percentage of the total number of satellites deployed at the end of the seven-year time limit (No 11.44) and the completion of the total deployment within a reasonable period after the BIU in either one or two steps (e.g. original date of bringing into use plus [3] years and [6] years). Failure to meet one of these milestones would, for example, result in cancellation of the frequency assignments for the milestone at the end of the seven-year time-limit, and adjustment of the notified information of the non-GSO satellite system based on the actual number of satellites and orbit characteristics in operation at the end of the [3] years and [6] years milestone.

WRC-15 discussed the issue at its seventh plenary session and recognized a lack of specific provisions in the Radio Regulations but was not able to conclude on the issue. Hence, WRC-15 invited ITU-R to examine, under Agenda item 7, the possible development of regulatory provisions requiring additional milestones beyond those under Nos 11.25 and 11.44 with regards to non-GSO satellite systems. This study may also consider the implications of the application of such milestones to non-GSO FSS/MSS satellite systems brought into use after WRC-15.

The 1st meeting of WP 4A in April 2016 agreed to accept this topic as Issue A under Agenda item 7 and developed a WD towards draft CPM text. The 2nd meeting of WP 4A in September-October 2016 received several inputs contributions on issue A that were compiled in a Working Document towards a Preliminary Draft New Report (PDNR) on studies relating to the BIU of frequency assignments to non-GSO FSS satellite networks/systems, the idea being that if an agreed report on this topic can be developed then draft CPM text could be derived from the report. The 3rd meeting of WP 4A in May 2017 produced a revision to that Working Document and refined the description of the various “options” for addressing this issue. The Working Document back then contained six potential options addressing the issue but it was noted that there needed to be a strong focus on reducing the number of “methods” under this Issue, and the membership was encouraged to consider that point in preparing for the next meeting of WP 4A.

The 4th meeting of WP 4A in October 2017 further developed this Working Document towards a PDNR, clarifying that it contains the detailed analysis performed in support of the development of RR provisions addressing BIU of frequency assignments to non-GSO satellite systems as well as a number of milestone-based deployment approaches for the maintenance of the MIFR for frequency assignments to non-GSO satellites in specific bands and services. Contributions were invited to address the specific bands and services to which this milestone-based deployment process will apply. The structure of the document was changed clarifying the focus to be milestones for the maintenance of the recording in the MIFR after a successful BIU in accordance with RR No. 11.44. Hence there were four proposed “approaches” (A to D) listed as example variations on the milestone-based approach for the further deployment thereafter, portraying different timings and percentages of satellites launched to meet the milestones.

The 5th meeting of WP 4A in February 2018 partially developed this Working Document towards a PDNR further but mainly focused its efforts on the draft CPM text development. The 6th meeting of WP 4A in July only carried forward the Working Document towards a PDNR ([Annex 20](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N20%21MSW-E.docx) of 4A/826) and fully focused its efforts on finalizing the draft CPM text, as captured in [Annex 30](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N30%21MSW-E.docx) of the Chairman’s Report 4A/826. The draft CPM text consists in two general conclusions, each with multiple options for implementation.

First, for BIU of frequency assignments for non-GSO satellite systems, BIU should apply for frequency assignments of all non-GSO satellite systems in all bands and services with the deployment of one or more satellites into a notified orbital plane, recognizing the radio navigation-satellite service desire to not have a 90-day BIU period, as well as the space operations service and the space research service to have no fixed period for BIU but by some other regulatory mechanism. The three options developed for BIU are listed in Table 3.

Table 3: List of Options developed for BIU

|  |  |
| --- | --- |
| Options | Descriptions |
| A | A continuous period of at least ninety days in a notified orbital plane of a satellite with the capability of transmitting or receiving the frequency assignments. Applicable to some NGSO systems based on new BR practice (RoP on RR No. 11.44) (Ed. of 2017). |
| B | A continuous period of X (one day to ninety days) of deployment in a notified orbital plane of a satellite with the capability of transmitting or receiving the frequency assignments may be sufficient. The ninety-day duration may not be required for the non-GSO administration/operator to determine that a space station with the capability has been deployed in a notified orbital plane |
| C | No fixed period. Administration informs the Bureau of BIU once it confirms deployment of a space station with the capability of transmitting/receiving the frequency assignments into one of the notified orbital planes |

Second, for non-GSO satellite systems in specific bands and frequencies, the draft CPM text contains a milestone-based approach established in a new WRC Resolution that would allow an additional period beyond seven years for the deployment of the number of orbital planes and the number of satellites per orbital plane contained in the filing. For this single option, seven examples of possible implementations (A–G) to the milestone-based approach are portrayed; for the milestone timings, the required percentage of satellites deployed to meet the milestones, the consequences of failing to meet a milestone (“Deployment Factor), and appropriate transitional measures to fairly and equitably subject non-GSO satellite systems already brought into use, but not fully deployed,. Also, one option includes a time-based option where along with reducing the number of satellites, the time between milestones would be reduced as a consequence when failing to meet a milestone.

Table 4: List of Options for a milestone-based approach for non-GSO systems
 Table 3/7/1.3.2-1 in Annex 30 of 4A/826



The draft CPM text also contains a single example Draft New WRC Resolution (in section 3/7/1.5.2.3 in [Annex 30](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N30%21MSW-E.docx) of 4A/826) including several areas where options are listed where agreement could not be reached by the meeting.

Finally, the draft CPM text contains seven guiding principles to be considered when developing the milestone approach to advance the efficient, rational and economical use of spectrum and orbital resource and improve the transparency of the deployment of non-GSO satellite systems (in section 3/7/1.3 in [Annex 30](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N30%21MSW-E.docx) of 4A/826). Hence all the seven examples of possible implementations of the milestone-based approach are designed to take into account the elements of the following principles:

1. The BIU process should be separate from any follow-up actions required to maintain the rights and protections for the recorded frequency assignments to non-GSO satellite systems.
2. The successful completion of the BIU process for non-GSO satellite systems does not require the deployment of all satellites in the system by the end of the seven-year regulatory period.
3. Appropriate time should be given to allow the completion of the deployment of non‑GSO satellite systems.
4. Appropriate transitional measures should be considered to address the implications of any new milestones adopted by WRC-19.
5. The milestone-based approach should be applied to all non-GSO satellite systems in specific space services in specific frequency bands.
6. Concurrently with the development of a milestone-based approach, methodologies should be developed for the implementation of RR Nos. 9.58, 11.43A, and 11.43B relating to the regulatory treatment of the adjustments to the characteristics of frequency assignments to non-GSO satellite systems.
7. The milestone-based approach should provide incentives to notifying administrations to deploy satellites in a timely manner, as a failure to meet a given milestone for a system will result in consequences.

In addition to drafting the Working Document towards a PDNR and draft CPM text, WP 4A has also developed Liaison statements to the contributing Working Parties 4C, 5A, 7B and 7C.

At the PTB#6 meeting in April 2018, it was noted that suspensions currently only apply to frequency assignments (Article 11.49). There is no definition of a “partial suspension” of a satellite constellation. ITU needs to consider the implications of temporarily removing one or several satellites from the constellation with regard to the milestone process and information recorded in MIFR. This was one of eleven open points for further considerations presented in an input contribution to the meeting (PTB(18)032).

At the PTB#7 meeting in September 2018 CEPT considered the transitional options, established by ITU-R WP 4A at its July 2018 meeting (Annex 30 of WP4A/826, Section 3/7/1.3.2.2) to address the transitional measures, each with a specific association to one of the options for the milestone-based approach.

Considering that sufficient time should be given to the satellite systems under development, one proposal considered by PTB was to set the first milestone on 1st January 2025, associated to option (B1, B2, B3) (see Table 4 in section 3: list of options for a milestone-based approach for non-GSO satellite systems), for satellite systems for which the regulatory period ends before a date set by WRC-19. Concerning the first transitional option, CEPT considered that the date for the commencement of the milestone process is January 1st 2023 in order to obtain a date of January 1st 2025 for the application of the first milestone. Concerning the second transitional option, CEPT considered that the date to be set for the beginning of the transitional milestone-based approach is July 1st, 2022 and that the date to be set for the commencement of the regular milestone process is January 1st, 2024.

As alternative proposals, CEPT considered two other options:

* that the date for the commencement of the milestone process is January 1st, 2021 associated to option (A1, A2, A3).
* that the date for the commencement of the milestone process is January 1st, 2021 associated to option (C1, C2, C3).

CEPT is still considering whether new provisions are required after the milestone process to maintain a certain accuracy between the real number of satellites deployed and the number of satellites indicated in the MIFR.

CEPT is still considering whether milestone-based approach should be applied to frequency bands 1.98-2.01, 2.17-2.2, 3.4-4.2, 5.091-5.25, 5.725-7.075, 7.25-7.75, 7.9-8.4 GHz.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* Section 3.2.2.4.4 of [WRC-15/4](http://www.itu.int/md/R15-WRC15-C-0004/en) (Add.2)(Rev.1) – Report of the BR Director to WRC-15
* Section 3.21 of [WRC-15/504](http://www.itu.int/md/R15-WRC15-C-0504/en) – Minutes of the seventh Plenary meeting on the 20 November 2015
* [CCRR/57](http://www.itu.int/md/R00-CCRR-CIR-0057/en) – BR draft Rule of Procedure on No 11.44
* [Summary of decisions](http://www.itu.int/md/R16-RRB16.3-C-0011/en) by the 74th meeting of the RRB (17-21 October 2016) item 4.3
* [Approved minutes](https://www.itu.int/md/R17-RRB17.1-C-0009/en) of the 74th meeting of the RRB (17-21 October 2016) item 4.3
* [PTB(17)039](https://cept.org/Documents/cpg-pt-b/38061/ptb-17-039_principles-and-a-proposed-methodology-for-issue-a-of-ai-7) – UK PTB#4 input contribution
* [PTB(17)046](https://cept.org/Documents/cpg-pt-b/38079/ptb-17-046_draft-cept-brief-on-ai-7-issue-a) – Luxembourgish PTB#4 input contribution
* [Annex 20](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N20%21MSW-E.docx) of 4A/826 – WD towards Preliminary Draft New Report in the Chairman’s Report of the 6th WP 4A meeting: Studies relating to the bringing into use of frequency assignments for all non-GSO satellite systems, and consideration of a milestone-based deployment approach for non-GSO satellite systems in specific bands and services
* [Annex 30](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N30%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting
* [4C/347](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4C-C-0347) – Liaison statement to Working Parties 4C, 5A, 7B and 7C
* [PTB(18)032](https://www.cept.org/Documents/cpg-pt-b/42354/ptb-18-032_list-of-questions-to-solve-om-ai-7-issue-a) – French and Luxembourgish PTB#6 input contribution
* PTB(18)068– French PTB#7 input contribution
* PTB(18)067– French PTB#7 input contribution

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and a draft European Common Proposal (ECP) taking the French PTB#7 input contribution PTB(18)067 into account
* Encourage inputs supporting the milestone approach with respect to the operational and planned NGSO satellite systems recently made public in order to confirm the milestone dates, objectives and consequences as defined in Background section. To review it for the next PTB meeting.
* Agree on the transitional measures for those non-GSO satellite systems whose end of the regulatory period comes before the date to be set by WRC-19, in order to provide sufficient regulatory certainty for the satellite systems under development.
* Agree whether the entry into force of the Final Acts of WRC-19 or a later date could be appropriate example dates to be taken into account for the beginning of the transitional measures or the milestone-based approach, in order to avoid the retroactive application of the methodology
* Define frequency bands and services to which the new non-GSO BIU regulatory framework shall be applicable
* CEPT should take into account that some next-generation satellite systems will initially deploy a low number of satellites to validate the design of a larger constellation and taking into account the need to de-orbit and replenish satellites while launching new spacecraft to complete constellations
* Further consider how to be sure that information contained in the MIFR is coherent with the reality after the last milestone

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support further studies related to the regulatory provisions and procedures for BIU of the frequency assignments of non-GSO systems and establishment of a milestone-based approach for alignment of non-GSO system deployment with the MIFR.

APT Members support the course of action which was taken by ITU-R/WP 4A to separate the studies of BIU of frequency assignments to non-GSO satellite systems in all bands and services and milestone-based deployment approach for non-GSO satellite systems in specific bands and services.

ATU (15 September 2017)

* Encourage administrations to support, contribute and actively participate in the studies;
* Note that the milestone approach is the most favoured option at this stage;
* Note that studies are currently focusing on non-GSO FSS.
* Note that Report ITU-R SA.2348-0 identifies some of the regulatory challenges which this proposal for a simplified regulatory regime would seek to address in dealing with non-GSO small satellites with short duration missions.

Arab Group (11 April 2018)

* Initial support to develop clear provision in RR with respect to NGSO in similar treatment with respect to GSO networks.
* Not to support first option, modification to 11.44
* Follow up studies results with emphasize on the Milestone approach and its ability to meet the following objectives:

Balancing the equitable access and spectrum efficiency with respect to radio spectrum and orbit resources.

Avoid any misuse for the filing procedures of NGSO networks

Follow up with BR regarding software tools may be required to query and ensure notification and BIU of NGSO consultation.

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This is Issue is at the stage of PV, with information submitted by Canada and Mexico.

Canada is of the view that the current seven-year period is not enough to deploy a “mega” non-GSO constellation. In this context, a milestone approach appears to be an appropriate solution. As such, Canada supports the seven principles developed by ITU-R WP 4A. With respect to principle 2 and consistent with the Rule of Procedure on No. 11.44, the bringing into use (BIU) of frequency assignments to non-GSO satellite systems should be considered successfully completed if, amongst other things, there is at least one non-GSO satellite deployed on any of the notified orbital planes. In relation to principle 3, Canada is also of the view that the bringing into use and notification of frequency assignments to a non-GSO satellite system within the 7-year regulatory period in accordance with No. 11.44 is a pre-requisite to the application of the milestone process. With respect to principle 4, Canada further believes that transitional measures will be required for non-GSO satellite systems for which frequency assignments have been notified, brought into use in accordance with No. 11.44 and for which the end of the associated seven-year regulatory period occurred prior to the date of entry into force of the final acts of WRC-19 (which is expected to be not earlier than Jan 1, 2021). With respect to principle 5, Canada is of the view that the milestone process should apply to all space services allocated in the following frequency bands: 3.4-4.2, 5.925-6.725, 10.7-13.25, 13.75-14.5, 17.3-21.2, 27.5-31, 37.5-43.5, 47.2-50.2 and 50.4-51.4 GHz.

Mexico also supports the studies carried out in WG-4A of the ITU-R, and further believes that commissioning frequency assignments associated with non-GSO satellite systems requires considering the deployment of a non-GSO satellite constellation at 100%; the seven-year period may not be sufficient in some cases. Mexico deems the milestone approach to be an option for the commissioning of frequency assignments associated with satellite constellations of non-GSO systems.

RCC (4 October 2018)

Bringing into use

With regard to bringing into use of non-GSO systems, the RCC Administrations support that frequency assignment to space station of non-GSO satellite systems shall be considered as having been brought into use, when notifying administration informed the Bureau that at least one space station with the confirmed capability of transmitting or receiving, has been deployed on one of the notified orbital planes of the non-GSO satellite system, irrespective of the notified number of orbital planes and satellites per orbital plane in the system. The RCC Administrations do not support identification in the Radio Regulations a continuous period of 90 or less days of deployment of a satellite, when bringing into use frequency assignments to non-GSO system.

Orbital tolerance elements shall take into account different types of orbits for non-GSO-systems and application of these systems.

The procedure of the milestone-based deployment approach

With regard to milestone-based approach to the deployment of multi-satellite non-GSO system, the RCC Administrations support adoption of new WRC-19 Resolution for fixed-satellite service (FSS) and mobile-satellite service (MSS) only in specific frequency bands (Ku-, Ka-, Q/V-bands). This Resolution shall identify the requirements for the implementation of each milestone of deployment (time period and percentage of the satellites deployed for each milestone) and restrictive measures applied to systems failed to meet the milestone (appropriate reduction in number of system satellites notified in the MIFR).

The RCC Administrations consider that time period and per cent of satellites deployed for each milestone of the system deployment and duration of the transition period shall ensure the balance between the capability to implement the non-GSO satellite system and effective use of the orbital and frequency resources, in order to prevent spectrum reservation by multi-satellite systems, which do not have real capability to implement the satellite grouping with notified characteristics.

RCC Administrations consider that the procedure for the the milestone-based approach of deployment shall not be applied to frequency assignments to non-GSO satellite systems/networks used for safety of human life.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (August 2018)

This issue involves development of a general definition of: 1) bringing into use (BIU) for NGSO systems and 2) the implementation of a milestone based deployment approach for specific services and bands.

SFCG is of the opinion that the proposed changes should only be applicable to FSS or MSS non-GSO constellations or systems subject to coordination under Section II of Article 9, or to RR Article 22, supporting adoption of revisions that would not impose undue constraints in operation of satellites with science missions.

Therefore, SFCG supports Option C of the draft CPM text (Working Party 4A Chairman Report Doc. 826, Annex 32) with respect to BIU and with respect to the milestone based deployment approach, SFCG supports Option 1 of the draft CPM text which limits the applicability of the milestone approach to only FSS and MSS systems. SFCG should oppose any changes in BIU which include a continuous deployment period for the space science services or inclusion of the space science services in the milestone based approach. Additionally under Issue A is the ideal of orbital tolerances for the inclination, apogee, perigee and argument of perigee. This should not be supported by the SFCG unless there is a clear understanding of how this will impact mission in the space sicence services which may not have the adequate propulsion resources to preform such station keeping and whose orbit will degrade over time.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. Issue B: Application of coordination arc in the Ka-band, to determine coordination requirements between FSS and other satellite services

# ISSUE B

Issue B addresses the possibility of introducing the coordination arc concept to determine the coordination requirements between MSS and FSS geostationary satellite networks and between MSS geostationary satellite networks, in the portions of the Ka band where both services, FSS and MSS, are allocated.

# Preliminary CEPT position

CEPT supports to apply the coordination arc to both MSS primary and secondary frequency assignments without modifying the current conditions related to the category of allocation applicable to assignments to be taken into account in coordination. Coordination arc criteria would substitute the ΔT/T>6% criteria that currently applies, improving and making more efficient the coordination procedures, while keeping the possibility for Administrations to request ΔT/T criteria under No 9.41. CEPT supports adequate modifications to Table 5-1 of RR Appendix 5 to implement this proposal, as outlined in Method B2 in the draft CPM text.

# Background

The 1st and 2nd meeting of WP 4A in 2016 received input contributions from Hispasat/Spain proposing the introduction of the coordination arc concept to determine the coordination requirements between mobile-satellite service (MSS) and fixed-satellite service (FSS) geostationary satellite networks as well as between MSS geostationary satellite networks in Ka-band where both services, FSS and MSS, are allocated. Both contributions study the characteristics of the earth station terminals used in the MSS and FSS in the Ka-band and conclude that they are quite similar. Taking into account that currently to determine if coordination is required in FSS vs FSS cases, coordination arc of 8º is applied in a successful and efficient way, Issue B proposes to apply the same criteria to the FSS vs MSS and MSS vs MSS cases, instead of the ΔT/T > 6% criteria that currently applies.

Administrations can always request application of No 9.41 to include additional satellite networks that would be affected taking into account the ΔT/T > 6% criteria.

As the proposal is considering to modify provisions of the Radio Regulations that directly affect the MSS, WP 4C is also studying the issue, and WP4A and WP 4C have sent multiple liaison statements to each other. WP 4C has therefore also been added as a contributing group for WRC-19 Agenda item 7 to this effect.

The 3rd meeting of WP 4A in May 2017 identified this topic as new Issue B under Agenda item 7 and the 4th meeting of WP 4A in October 2017 clarified that the issue should preferably not consider particular treatment for primary or secondary allocations but rather introduce the coordination arc in the full bands 29.5-30 GHz (Earth-to-space) / 19.7-20.2 GHz (space-to-Earth) in all 3 Regions.

Draft CPM text has been developed ([Annex 31](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N31%21MSW-E.docx) to Doc. 4A/826) containing two Methods to satisfy the issue:

* Method B1 proposes No Change to the RR
* Method B2 proposes to modify the technical conditions for coordination in RR Table 5-1 based on CEPT inputs

The 5th meeting of WP 4A sent another liaison statement to WP 4C ([4C/348](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4C-C-0348)) informing WP 4C of its progress noting that the draft CPM text was quite stable and consolidated. The 6th meeting of WP 4A only received one input contribution, a liaison statement from WP 4C ([4A/815](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0815)) supporting the application of the coordination arc in the Ka band for the MSS, and WP 4A easily finalized the draft CPM text.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

[4A/815](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0815) – Liaison statement from WP 4C to WP 4A

[Annex 31](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N31%21MSW-E.docx) to Doc. 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

Further develop the preliminary CEPT position and the draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support the consideration of coordination arc concept to determine coordination requirements between the GSO FSS and GSO MSS satellite networks and between GSO MSS satellite networks in the bands 29.5-30 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) , while keeping the possibility for administrations to apply ΔT/T > 6% criteria under No. 9.41, provided that the results of the ITU-R studies does not impact the operations of satellite networks in particular those used for safety of life aspects.

ATU (15 September 2017)

Support the studies and to urge African administrations to contribute and actively participate in the studies.

Arab Group (11 April 2018)

* Follow up studies.
* Initial support to apply coordination Arc between FSS and MSS and between MSS and MSS networks in the band 19.7-20.2 and 29.5-30 GHz, instead of DT/T (6%) approach.
* Continue the application of 9.41 with respect to networks exceeds DT/T 6%

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP).

CITEL has a DIAP supported by Brazil and Canada that extends the application of the coordination arc approach based on ±8 orbital separation to MSS frequency assignments to a GSO space station in the 29.5-30/19.7-30 GHz bands.

RCC (4 October 2018)

The RCC Administrations support introducing the coordination arc mechanism in Ka-band to identify the need in the coordination between MSS and FSS geostationary satellite networks, as well as between MSS geostationary satellite networks, while maintaining the possibility of applying RR No. 9.41(Method В2).

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG ( 13 September 2017)

Issues B, C and E through G do not concern SFCG as they pertain to the FSS and BSS Plans.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. Issue C: Issues for which consensus was achieved in ITU-R and a single method has been identified

# ISSUE C

Issue C is a collection of several different topics that are viewed as being straightforward and for which consensus was achieved within ITU-R. The seven issues address inconsistencies in regulatory provisions, clarify and improve certain existing practices, or increase transparency in the regulatory process.

# Preliminary CEPT position

CEPT supports the consensus achieved at ITU-R level.

# Background

At the 3rd meeting of WP 4A in May 2017 it was recognized that the previous Issue C was a straightforward topic, and that several other topics that had been raised in the context of Agenda item 7 that were also considered straightforward. The meeting therefore decided to group these issues, for which consensus was easily reached and for which a single “method” was identified, as sub-topics under Issue C. Issue C is currently a collection of seven different topics that are considered to offer simple, straightforward improvements to the RR captured in a combined Preliminary draft CPM text.

* Issue C1 considers the discrepancy between the wordings in paragraph 8.13 of Article 8 of Appendix 30B and No. 11.43A of Article 11. The difference consists in that No. 11.43A deals with a modification of an assignment that “has been recorded and confirmed as having been brought into use”, whilst the Appendix 30B’s provision refers to an assignment that “has been notified and confirmed as having been brought into use”. This is a relevant difference, as an assignment could have been notified but not yet recorded for a number of different reasons. Issue C1 therefore proposes replacing the word “notified” with “recorded” in § 8.13 of Appendix 30B.
* Issue C2: RR Appendix 30B consists of two sub-bands of 250 MHz each (10.70-10.95 GHz and 11.2-11.45 GHz). Submission from administrations when applying Article 6 of RR Appendix 30B for additional use usually covers both sub-bands of 250 MHz but while successfully applying Article 6 for the two sub‑bands, may when applying Article 8 only bring into use one sub-band. There is no provision in Appendix 30B prohibiting, strictly speaking, to allow Administrations to submit an application for one of the sub-bands in an explicit submission under RR Appendix 30B. However, there is no specific provision authorizing that application when submitting RR Appendix 4 for either one of the two sub-bands. Hence, Issue C2 was proposing to add a paragraph 6.1bis to this effect

At the 3rd WP 4A meeting, the BR confirmed no difficulty to perform processing for sub-bands noting that this will not necessarily be the spirit of the Plan since an Appendix 30B allotment comprises of the entire band. At the 4th WP 4A meeting, inputs from Iran (4A/[426](https://www.itu.int/md/R15-WP4A-C-0426/en)) and China (4A/[453](https://www.itu.int/md/R15-WP4A-C-0453/en)) provided further modifications to the draft CPM text and BR clarified that modifications to the BR software would be necessary and questioned whether it would be efficient to use only part of the Appendix 30B spectrum. As a result of the meeting discussions, the regulatory solution was amended with RR provision 6.17bis in order to clarify that the regulatory amendments proposed within the scope of the issue does not apply to the conversion of allotment into assignment but is only addressing the case of additional use.

At the 5th WP 4A meeting in February 2018, the BR commented that they may need additional instructions for the implementation of the suggested change but no changes to the preliminary draft CPM text was made.
At the 6th WP 4A meeting in July 2018, the BR provided an input clarifying the reference frequencies used in RR Appendix 30B technical examinations: a single center frequency in uplink and in downlink is used to calculate the C/I and C/N ratios in the 13/10 11 GHz bands, i.e. 13 000 MHz for uplink and 11 200 MHz for downlink (see Section 3 of Document 4A/766). Should WRC-19 decide to adopt the method proposed under Issue C2, these centre frequencies could continue to be used regardless of the sub-band under consideration in the 13/10-11 GHz bands and strapping scheme in order to keep the continuity of the C/I reference values for all the allotments and assignments. It would also have the benefit to avoid additional transitional arrangement for Article 6 networks (Part A) received before the entry into force of the WRC-19 decisions. No objections to this course of action were raised by WP 4A.

* Issue C3: Pursuant to application of paragraph 6.6 of Article 6 of RR Appendix 30B, agreements may be reached or not. Without such an agreement from a country, its territory will be excluded from service area of the proposed new network when the notifying administration will request to include the network in the List. The other characteristics of the network, including the coverage, can be kept without modification. Issue C3 is proposing to amend paragraph 6.15bis clarifying that § 6.13 to 6.15 of Appendix 30B, where the notifying administration may request the BR to assist with sending reminders to other Administrations, do not apply to the agreement requested under § 6.6 of Appendix 30B.

At the 3rd WP 4A meeting, BR confirmed this understanding but Canada questioned the need for amending RR as Administrations could still seek the assistance of the BR under No.13.1. At the 4th WP 4A meeting, inputs from Canada (4A/416) and Iran (4A/427) provided different possible regulatory amendments to clarify that the BR assistance under Nos. 6.13 to 6.15 could not be sought for agreement requested under No. 6.6 resulting in the WD section 3/7/3.3.3 Summary and analysis of the results of ITU-R studies mentioning that the “was analysed and does not seem to be problematic although not essential” in the Working Document towards preliminary draft CPM text.

* Issue C4: Normally, at the end of the coordination process for Regions 1 and 3 under Article 4 of RR Appendices 30 and 30A and when a network is about to be implemented, systems are submitted for entry into the List under § 4.1.12 and for Notification under §§ 5.1.1 and 5.1.2, respectively at the same time with both provisions referring to actions following the completion of the coordination process and both required to implement the network. It would therefore reduce the workload of both Administrations and the BR if one physical submission could be treated as, and examined in respect of both these provisions. In respect of RR Appendix 30A, it would seem that this would be in particular of value for notification of receiving space stations and typical earth stations while specific earth stations probably in many cases would be subject to separate notices as the requirements change with time. Furthermore, RR Appendix 4 information required for submission under § 4.1.12 and § 5.1.1/5.1.2 seem to be identical for entry into the List and notification. At the 3rd WP 4A meeting, BR confirmed that it is already possible to request such treatment but Issue C4 is proposing to amend paragraph 4.1.12bis clarifying this option.

At the 5th WP 4A meeting in February 2018, the WP 4A Chair amended the preliminary draft CPM text with general sentences in the Summary and Analysis of the results of ITU-R studies, and for the Method to satisfy Issue C, noting the similarities in Issues C2 and C4.

* Issue C5: Pursuant to RR No. 11.46, the BR allows notifying Administrations six months to resubmit their notified frequency assignments which were returned due to an unfavourable finding with respect to RR Nos. 11.32, 11.32A or 11.33. Any receivable notification resubmitted beyond these six months is considered as a new notification with a new date of receipt and would be subject to cost recovery fees. However, neither RR No. 11.46 nor any other RR provision currently requires the BR to send a reminder to the notifying Administration during the six month period. Issue C5 is proposing to add such a reminder thru a footnote to No. 11.46 ensuring that frequency assignments that are in use are properly recorded in the Master Register.
* Issue C6: Normally, at the end of the coordination process under Article 6 of RR Appendix 30B and when a network is about to be implemented, systems are submitted for entry into the List under § 6.17 and for Notification under § 8.1 at the same time with both provisions referring to actions following the completion of the coordination process and both required to implement the network. Enabling, as an option, administrations to submit one notice and request in a letter to the BR to be treated both in respect of entry into the List and Notification would simplify the processing and reduce the workload of the BR and Administrations. Since this is not possible under the current provisions of RR Appendix 30B this issue C6 is proposing to modify § 6.17 and several Footnotes to Tables A, B, C and D in Annex 2 of Appendix 4 to allow one submission to be treated in respect of both provisions and to modify RR Appendix 4 to enable this. If one submission is to be treated both in respect of entry into the RR Appendix 30B List (under § 6.17) and Notification, it is important that the Bureau has the required information as specified by RR Appendix 4 for both types of submission.

The 3rd WP 4A meeting output ([Annex 36](https://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP4A-C-0364!N36!MSW-E) of WP4A/364) also notes that it should be double checked if decisions by earlier WRCs has made changes that introduce other differences between § 6.17 submissions and § 8.1 submissions. At the 4th WP 4A meeting, an Asiasat input contribution ([4A/420](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0420)) clarified the requirement for the notifying administration to provide the date of bringing into use and type of emission to be used for the notification in its cover letter if submitting only one notice. BR commented that misunderstandings may arise and that it would be burdensome to include information from the cover letters of administrations into the database. As a result of the meeting discussions, the revised proposal entails modifications to the current SpaceCap software. Then BR however expressed that if such software modifications to convert a § 6.17 notice to a § 8.1 notice is implemented there is no need for any modification to the RR and this issue may no longer exist which was included in section 3/7/3.3.6 Summary and Analysis of the results of ITU-R studies for Issue C6 in the Working Document towards preliminary draft CPM text ([Annex 35](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0519%21N35%21MSW-E.docx) to Doc. 4A/519) as “one view expressed”.

* Issue C7: proposes to harmonize AP 30B with AP30 & 30A § 4.1.13 for Regions 1 and 3 and § 4.2.17 for Region 2, respectively, i.e. re-introducing a regulatory option to capture obtaining agreements for a specific period. CEPT has established at preliminary CEPT position supporting the development of appropriate regulatory text for introducing in Appendix 30B the concept of time-limited agreements in Regions 1 and 3.

At the 4th WP 4A meeting, Iran submitted yet another input contribution on Issue E ([4A/428](file:///C%3A%5CUsers%5Camarklu%5CDesktop%5CDesktop%5CITU%5C2017%20ITU%5CWP%204A%5CWP4A%20October%20meeting%5CSES%5CDraft%20report%5CDraft%20Issues%20B-G.docx)) which third proposal was used when drafting this new issue C7, as the single proposed method to satisfy the issue by adding RR No. 6.15bis to Appendix 30B seemed to be easily agreed upon.

The 6th WP 4A meeting in July 2018 received three inputs associated with improvements/changes to sub-items C2, C4 and C7. None of these inputs were considered controversial and the text for the three sub-items was updated. With these improvements the draft CPM text for Issue C was finalized, and captured as draft CPM text in [Annex 32](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N32%21MSW-E.docx) of the Chairman’s Report 4A/826 with single methods identified for each of the seven sub-items.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 32](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N32%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

* On Issue C1: APT members support the single method to address this issue by aligning the text of paragraph 8.13 of Article 8 of RR Appendix 30B with that of RR No. 11.43A of RR Article 11 while ensuring that this alignment should not impact on any other current regulatory practice.
* On Issue C2: APT members support the single method which can allow Administration to submit an application for one of the blocks/sub-bands of 250 MHz (10.7-10.95 GHz or 11.2‑11.45 GHz for downlink and 12.75-13.0 GHz or 13.0-13.25 GHz for uplink)in an explicit submission of one of the blocks/sub-bands under RR Appendix 30B.
* On Issue C3: APT members support the single method to add a new provision in Article 6 of RR Appendix 30B to clearly state that § 6.13 to 6.15 of RR Appendix 30B do not apply in the context of requirements associated with §6.6 of RR Appendix 30B.
* On Issue C4: APT Members support the single method in the Preliminary Draft CPM text for WRC-19 agenda item 7 – Issue C for Issue C4.
* On Issue C5: APT Members support the single method to modify RR No.11.46, as mentioned in the draft CPM text, requiring the Bureau to remind the notifying administrations of the six month deadline to resubmit their frequency assignments under RR No. 11.46.
* On Issue C6: APT members support the single method to allow one single submission to be treated both in respect of entry into the List under §6.17 and notification under §8.1 of RR Appendix 30B to reduce workload of both administration and the Bureau.
* On Issue C7: APT Members support the single method to add a new provision 6.15bis to Article 6 of RR Appendix 30B in order to recognize the possibility of obtaining agreement from affected administrations for a specified period.

ATU (15 September 2017)

Support the WP4A proposal of treatment of non-contentious issues: the collection of several different topics that are viewed as being straightforward and for which consensus was readily achieved within ITU-R study groups into Issue C in order to enable the efficient work of WRC-19 and preparation thereof.

Arab Group (11 April 2018)

Initial support for single method proposed in draft CPM text.

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP).

* On Issue C1: This is at the stage of DIAP, supported by Brazil, Mexico, and Canada. The DIAP is to align the text of §8.13 of Article 8 in Appendix 30B with that of No. 11.43A. The only change is to replace the word “notified” with “recorded”. This is consistent with the single method proposed in the Draft CPM text.
* On Issue C2: This is at the stage of DIAP, supported by Brazil and Mexico. This adds two new provisions that update the Radio Regulations in accordance with existing practices between administrations in the application procedures for additional use and/or putting into service a block/sub-band of 250 MHz in 11-13 GHz according to their needs. This is consistent with the single method proposed in the Draft CPM text.
* On Issue C3: This is at the stage of DIAP, supported by Brazil and Mexico. This adds a provision to the Radio Regulations to clearly indicate that an administration identified under § 6.6 of Appendix 30B is not subject to §6.13 to §6.15 of Appendix 30B. This is consistent with the single method proposed in the Draft CPM text.
* On Issue C4: There is a PV on this Issue with content from Mexico, consistent with the intent of the single method proposed in the Draft CPM text.
* On Issue C5: This is at the stage of DIAP, supported by Brazil, Mexico, and Canada. Currently, for any return of notice as a result of an unfavourable finding under No. 11.32, 11.32A or No. 11.33, the notifying administration has six months to resubmit its notice without a change to the date of the original submission of the notice, however, there is no reminder sent by the Bureau during the six-month period. This DIAP supports the BR sending a reminder after four months. This is consistent with the single method proposed in the Draft CPM text.
* On Issue C6: This is at the stage of PV with content from Brazil, Canada, and Mexico, consistent with the intent of the single method proposed in the Draft CPM text.
* .
* On Issue C7: There is a PV on this Issue with content from Mexico, consistent with the intent of the single method proposed in the Draft CPM text.

RCC (4 October 2018)

* On Issue C1: The RCC Administrations consider that the existing discrepancy between provisions of Articles in Appendices 30, 30А and 30В and the terminology of Article 11 provisions do not lead to complications when applying the relevant provisions of the Radio Regulations.
* On Issue C2: The RCC Administrations support the proposal on possible notification of frequency assignments blocks with bandwidth of 250 MHz each for additional systems in Ku-band within Appendix 30B.
* On Issue C3: The RCC Administrations do not oppose the modification of RR Article 6 §§ 6.13 and 6.15 of Appendix 30B taking into account the Rules of Procedure under RR § 6.6 of Appendix 30B.
* On Issue C4: The RCC Administrations support the proposal on submitting and processing a single notice for a new assignment to be included into the List under § 4.1.12 and recorded under §§ 5.1.1 and 5.1.2 for the networks in the RR Appendices 30/30А in Regions 1 and 3.
* On Issue C5: The RCC Administrations support the proposal that Radiocommunication Bureau should timely notify the administration on expiration of the 6-month deadline after the unfavorable finding was sent under RR No. 11.37 or No. 11.38.
* On Issue C6: The RCC Administrations support the proposal that for satellite networks in the RR Appendix 30B administrations would submit a single notice for a new assignment to be included into the List and recorded.
* On Issue C7: The RCC Administrations consider proposals on the modification of RR Appendix 30B, allowing administrations to conclude agreements among themselves for a specific period of time.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG ( 13 September 2017)

Issues B, C and E through G do not concern SFCG as they pertain to the FSS and BSS Plans.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE D: Identification of those specific satellite networks and systems with which coordination needs to be effected under RR Nos 9.12, 9.12A and 9.13

# ISSUE D

Issue D addresses the proposal that the Bureau publishes in the CR/D special section the “definitive lists” of those specific GSO networks or non-GSO systems, as appropriate, with which coordination under Nos 9.12, 9.12A and 9.13 needs to be effected, similarly to what is currently done under the provisions of No 9.36.2.

# Preliminary CEPT position

СEPT proposes that the Bureau publish in the CR/D special section the “definitive lists” of those specific GSO networks or non-GSO systems, as appropriate, with which coordination under Nos 9.12, 9.12A or 9.13 needs to be effected, similarly to what is currently done under the provisions of No 9.36.2, as outlined in Method D2 in the draft CPM text.

CEPT understands that, once the relevant software currently used by the Bureau will be amended as needed, such an approach would not significantly increase the daily workload of the Bureau for producing such lists. In fact, the Bureau carries out a similar analysis to produce the list of Administrations currently published in the BR IFIC under the provisions of No 9.36.1; the proposed changes would just modify the details published in the BR IFIC, together with simplifying the administrative burden currently born by many Administrations.

# Background

No 9.36.2 significantly decreases the administrative workload related to the identification of the satellite networks, systems and earth stations, as applicable, with which coordination needs to be effected under Nos 9.7, 9.7A and 9.7B. However, for the cases of coordination under Nos 9.12, 9.12A and 9.13, the relevant Special Section of the BR IFIC includes only a list of Administrations rather than a list of specific GSO networks or non-GSO systems, as appropriate, for which those Administrations are responsible.

In order to address this issue, the Bureau could include in the CR/C special sections the list of potentially affected administrations as well as lists of their potentially affected satellite networks and systems for coordination cases related to Nos 9.12, 9.12A and 9.13. The potentially affected administrations would then comment under Nos 9.51 or 9.52, as appropriate, according to the same current process but would identify in their comments (and in the SpaceCom database) the affected satellite networks or systems on the basis of the lists published in the CR/C. The Bureau would then compile and publish these comments in a CR/D special section according to No 9.53A. The process would therefore be similar to the current one but it would offer two main advantages: firstly, the comments under Nos 9.51 or 9.52, as appropriate, would be much simpler to be made as they would entail a check of a pre-compiled list published in the CR/C special section; secondly, the CR/D special section would contain a “definitive list” of satellite systems instead of a simple list of administrations.

It should be noted that the identification of the potentially affected satellite networks or systems would not require any additional tools since the coordination trigger for Nos 9.12, 9.12A and 9.13 in Appendix 5 is based on a simple frequency overlap.

This issue was initiated at the first CPG PTB meeting in June 2016 by France and UK, also suggesting it as CEPT to the 2nd WP 4A meeting in 2016. At the meeting, the BR also confirmed that once the current relevant software is amended as needed, to publish more detailed information will not significantly increase their daily workload.

The 3rd meeting of WP 4A in May 2017 concluded on a Working Document towards preliminary draft CPM text containing three Methods to satisfy the issue:

* Method D1 proposes No Change to the RR
* Method D2 is based on the CEPT proposal to modify RR No. 9.36.1 in order for BR to publish a pre-compiled list of satellite networks and/or systems potentially affected for information in the CR/C Special Section, as well as modifying RR Nos. 9.52C and 9.53A in order for BR to publish a definitive list of satellite networks and/or systems to be considered when effecting coordination to be included in the CR/D Special Section
* Method D3 is the same as Method D2 for RR No. 9.36.1 but proposes No Change for the rest of RR Article 9 in order to have the list of satellite networks or systems potentially affected for information only, even at CR/D stage

The 4th meeting of WP 4A in October 2017 concluded to not include RR No. 9.21 in the scope of the issue and further established the three methods above. The 5th meeting in February 2018 concluded that the draft CPM text was pretty final, and with one input proposing a minor change to the 6th WP 4A meeting the draft CPM text was easily finalized and captured as draft CPM text in [Annex 33](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N33%21MSW-E.docx) of the Chairman’s Report 4A/826.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 33](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N33%21MSW-E.docx) to Doc. 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

Further develop the preliminary CEPT position and the draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support Methods D2 or D3, as mentioned in the draft CPM text (See Annex-36 to last WP 4A Chairman’s Report: 4A/675).

ATU (15 September 2017)

Support the proposal which seek to have the BR provide more information for satellite coordination: this information would help administrations when undertaking coordination by the provision of more coordination information the before.

Arab Group (11 April 2018)

* Follow-up studies
* Initial support to method D2 in draft CPM text

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP).

This Issue is at the stage of DIAP, supported by Brazil, Mexico, and Canada. The DIAP supports that in the case of coordination under RR Nos. 9.12, 9.12A and 9.13, the Bureau should publish a definitive list of the potentially affected satellite networks. The DIAP also provides associated draft regulatory text to affect this, in the form of modifications to No. 9.36.1, No. 9.52C, and No. 9.53A.

RCC (4 October 2018)

The RCC Administrations support the identification of specific GSO or non-GSO satellite networks which need coordination only according to RR Nos. 9.12, 9.12А or 9.13 as well as modification of relevant RR provisions (method D2).

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (August 2018)

SFCG does not oppose either Method D2 or D3 (Working Party 4A Chairman Report Doc. 826, Annex 33) of the draft CPM text. This issue relates to publication of a list of potentially affected networks at the time of coordination which may be useful for SFCG members.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

ANNEX 5:
Issue E: : Resolution related to RR Appendix 30B

# ISSUE E

Issue E is considering a draft new Resolution with a special procedure to be applied once for submissions with national service and coverage area by administrations not having any networks in the Appendix 30B List or under coordination. This new Resolution would facilitate access for these administrations and avoid overprotection and unnecessary coordination.

# Preliminary CEPT position

CEPT supports to pursue a solution that directly addresses the concern for administrations having nothing in the RR Appendix 30B List, to allow these administrations to convert their national allotments into assignments with characteristics outside the envelope of the allotment or make a submission for a new network provided that the assignment are limited to national service and coverage area. CEPT therefore supports the WRC Resolution as contained in the draft CPM text following the philosophy of Resolution 553 (WRC-15) which addresses a similar issue for the 21.4-22 GHz BSS band for Regions 1 and 3, as outlined in the single method.

# Background

Both earlier Agenda item 7 issues E and F arose out of a concern with the lack of the ability of administrations having nothing in the RR Appendix 30B List to convert their national allotments into assignments. In discussing these issues at the 5th meeting of WP 4A in February 2018 it was agreed to instead pursue an alternative solution which more directly addresses the underlying issue; a method based on a WRC Resolution with a special procedure to facilitate coordination of a submission from administrations not having any networks in the Appendix 30B List or under coordination. This WRC-19 Resolution draws on elements adopted for Appendix 30 and 30A by WRC-2000, for the 21.4-22 GHz band for Regions 1 and 3 by WRC-12 in Resolution 553 (WRC-15) and from elements under Issue 9.1.2 at WRC-15.

This proposed Resolution includes procedures for applications for conversion of the allotment of an administration into assignment with changes which are outside the envelope of the initial allotment or for submission by an administration of an additional system while restricted to national service and coverage area. Elements of this procedure include a procedure that can be applied only once by an administration having no network in the Appendix 30B List or under coordination, and only for a submission with national service and coverage area.

In respect of networks in the List, not entered under this special procedure, administrations making submissions under this special procedure will enjoy relaxed protection criteria:

* Adopting the structure decided by WRC-2000 for RR Appendices 30 and 30A and by WRC-12 for BSS in the 21.4-22 GHz band, i.e. a coordination arc, hard limits (contained in Annex 3 of Appendix 30B) to protect networks outside the coordination arc and mechanisms to remove unnecessary coordination requirements inside the coordination arc.
* Introducing pfd masks and levels like in RR Appendices 30 and 30A as well as in portions of the unplanned bands to remove unnecessary coordination, avoiding combinations of technical parameters leading to unrealistic links which hinders introduction of new networks. Proposed values for pfd masks and levels are those developed in preparation for WRC-15 Issue 9.1.2, but based on a level of protection corresponding to ΔT/T = 12% instead of 6% (for C-band antennas with a diameter between 1.2 and 18 m and Ku-band antennas with a diameter between 45 cm and 11 m).
* Single entry C/I criteria relaxed by 3 dB compared to the regular coordination triggers.

At the 5th meeting of WP 4A it was concluded that, provided that this draft WRC-19 Resolution solution goes forward to CPM19-2, the previously identified Issues E and F would no longer be pursued. Explicitly, the meeting concluded that “Issues E and F are of a general nature intending to harmonize certain provisions of RR Appendix 30B with those of RR Appendices 30 and 30A and to enhance certain provisions of RR Appendix 30B. After discussion at WP 4A it was concluded that appropriate measures to resolve the difficulties raised in Issues E and F will be addressed in a more specific manner in a draft Resolution for consideration by WRC-19. For this reason, Issues E and F are provisionally suspended. Once this Resolution is finalized, Issues E and F will no longer be pursued.”

At the 6th meeting of WP 4A in July 2018 this alternative solution to earlier Issues E and F that more directly addresses the underlying problems, was further developed and agreed, partly based on a CEPT input contribution. Complete draft CPM text was developed, finalized, and captured as draft CPM text in [Annex 34](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N34%21MSW-E.docx) of the Chairman’s Report 4A/826 with this draft new Resolution as the single method to satisfy the issue. With that agreement, the meeting suppressed the previous Issues E and F and replaced Issue E with this earlier Issue M.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 34](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N34%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (date of proposal)

ATU (date of proposal)

Arab Group (11 April 2018)

* Follow up studies
* Study proposed resolution, considering pros and cons of its applications

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This Issue is at the stage of PV. Brazil supports the WP 4A agreement to pursue an alternative solution that more directly addresses the underlying concern for administrations having no network in the RR Appendix 30B List, to allow these administrations to convert their national allotments into assignments.

RCC (4 October 2018)

The RCC Administrations support the draft Resolution [AP30B] (WRC-19) with the most favourable procedure for converting the national allotment into assignment with modified characteristics within national borders of the notifying administration or for entering additional system to the List of frequency assignments, with a service area restricted to a national territory, for administrations without any assignments in the List.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

ANNEX 6:
ISSUE F: Measures to facilitate entering new assignments into the RR Appendix 30B List

# ISSUE F

This issue proposes to revise and restructure the coordination triggers used in Appendix 30B to take into account technological advances and the development of the use of the geostationary orbit to facilitate access for newcomers by avoiding overprotection and unnecessary coordination requirements.

# Preliminary CEPT position

CEPT supports to revise and restructure the coordination triggers used in Appendix 30B to take into account technological advances and the development of the use of the geostationary orbit to facilitate access for newcomers by avoiding overprotection and unnecessary coordination requirements, as outlined in Method F1 in the draft CPM text. CEPT believes that this would help to alleviate the difficulties faced by administrations in attempting to enter assignments into the Appendix 30B List and to facilitate coordination of networks, at the same time appropriately protecting the Appendix 30B Plan and List.

# Background

At the October 2017 meeting of Working Party 4A, concerns were raised on the difficulties encountered by newcomers trying to get into the Appendix 30B List, e.g. through conversion of national allotments with modified parameters. CEPT shares these concerns and has identified alternative measures to facilitate entering new satellite networks into the Appendix 30B List.

For this reason, CEPT has previously made proposals which have subsequently been developed into Issue K whereby newcomers to get their network into the List can benefit from the reduction of the service area and technical parameters of other networks during their coordination process. In addition to Issue K, CEPT has identified another measure to facilitate entering new satellite networks into the Appendix 30B List. In this issue, CEPT proposes to revise and restructure the coordination triggers used in Appendix 30B to take into account technological advances and the development of the use of the geostationary orbit to facilitate access for newcomers by avoiding overprotection and unnecessary coordination requirements, though aligning the size of the coordination arc with that of the unplanned bands and adopting coordination mechanisms including introduction of a pfd mask in Annex 4 of RR Appendix 30B to avoid the use of overly sensitive technical parameters in ITU filings. CEPT submitted an input contribution [4A/574](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0574) to the 5th WP 4A in February 2018 introducing this new issue (in Attachments 1 and 2) proposing to further discuss the details of it and establish this issue as a new issue within the scope of Agenda item 7. The 5th meeting of WP 4A agreed to include this issue in Agenda item 7 as previous Issue N as per the CEPT input contribution.

The method proposes modifications to Annex 3 and 4 of Appendix 30B and would be beneficial to all submissions for new networks, including those of newcomers and those of any administrations seeking to convert their national allotments into assignments with changes. Specifically, the proposed changes include:

* Adopting the structure decided by WRC-2000 for RR Appendices 30 and 30A, i.e. a reduced coordination arc and mechanisms to remove unnecessary coordination requirements inside the coordination arc.
* Bringing the size of the coordination arc in line with that used for the unplanned bands, i.e. 7° for C-band and 6° for Ku-band and consequently align the Annex 3 limits to newly established coordination arcs.
* Introducing pfd masks and levels as in RR Appendices 30 and 30A as well as in portions of the unplanned bands to remove unnecessary coordination and prevent combinations of technical parameters leading to unrealistic links and hindering introduction of new networks. Proposed values for pfd masks and levels are those developed in preparation for WRC-15, based on a level of protection corresponding to ΔT/T = 6% (for C-band antennas with a diameter between 1.2 and 18 m and Ku-band antennas with a diameter between 45 cm and 11 m).

With the agreement at the 6th meeting of WP 4A in July 2018 to suppress previous Issues E and F, it was also agreed to replace Issue F with this previously identified Issue N. Two inputs were received which improved the previous text on this issue, out of one was a CEPT input [4A/813](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0813). The meeting finalized draft CPM text that was agreed and captured as draft CPM text in [Annex 35](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N35%21MSW-E.docx) of the Chairman’s report 4A/826, containing two Methods to satisfy the issue:

* Method F1 proposes the modifications to Annex 3 and 4 of Appendix 30B described above
* Method F2 proposes No Change to the RR

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 35](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N35%21MSW-E.docx) of 4A/6826 – Draft CPM text in the Chairman’s Report of 6th WP 4A meeting
* Section 2.2.1 and 2.2.2 of [Annex 12 to 4A/595](https://www.itu.int/dms_ties/itu-r/md/07/wp4a/c/R07-WP4A-C-0595%21N12%21MSW-E.docx) from the 2007-2012 study cycle – Working document towards a preliminary draft new Report ITU-R S.[PFD\_11.32A] - Use of pfd levels to determine whether an administration is likely to be affected when applying No. 11.32A of the Radio Regulations, in the WP 4A Chairman’s Report from the 2007-2012 study cycle, showing the developed pfd
* [4A/508](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R07-WP4A-C-0508) – WP 4A input from Norway from the 2007-2012 study cycle, Determining appropriate pfd values to be used under Methods B and C of Issue 2A of the CPM Report on Agenda item 7, also showing the developed pfd

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP) if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (date of proposal)

ATU (date of proposal)

Arab Group (11 April 2018)

* Follow up studies
* Study proposed resolution, considering pros and cons of its applications
* Support updates to Appendix4

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This Issue is at the stage of PV. Mexico supports ITU-R studies to update the Appendix 30B coordination triggers, considering the new technological breakthroughs in these systems and to ensure the protection of existing and future networks.

RCC (4 October 2018)

The RCC Administrations do not support modifications of existing criteria of Annex 4 to RR Appendix 30B for determining affected allotments or assignments which can reduce the protection of assignments of RR Appendix 30B List and allotments of RR Appendix 30B Plan (Method F2).

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. Issue G: updating the reference situation for region 1 and 3 networks under Appendices 30 and 30A when provisionally recorded assignments are converted into definitive recorded assignments

# ISSUE G

Issue G considers conditions to change provisional recording to definitive and update the reference situation for networks under Appendices 30 and 30A.

# Preliminary CEPT position

CEPT supports that when a network enters the List under § 4.1.18 of Appendix 30 or 30A while there is still disagreement, the reference situation of the interfered-with network shall only be updated if and when the Bureau is informed by the affected administration to do so. CEPT suggests modifying § 4.1.18bis to reflect this view, as outlined in Method G1 in the draft CPM text.

# Background

§§ 4.1.18-20 of Appendix 30 to the Radio Regulations describes the requirements and conditions for recording in the Region 1 and 3 List of a network with outstanding coordination requirements. The same provisions are also contained in Appendix 30A. § 4.1.18 prescribes that, in the case of recording in the List with outstanding coordination requirements, this recording shall be provisional, but that the entry shall be changed from provisional to definitive recording in the List if the Bureau is informed that the new assignment in the Regions 1 and 3 List has been in use, together with the assignment which was the basis for the disagreement, for at least four months without any complaint of harmful interference being made.

In Appendix 30B, the corresponding provisions (§§ 6.25-6.29) are worded different in respect of the change from provisional to definitive recording, saying that the entry in the List shall be changed from provisional to definitive only if the Bureau is informed that all required agreements have been obtained.

The wording of § 4.1.18 is similar to that previously used in No 11.41. However, it is noted that this was deleted by WRC-12. More importantly is the principle difference between the unplanned and planned bands in that while the unplanned bands just have single-entry protection criteria, the planned bands have a reference situation which takes into account the aggregation of interference from all other networks upon which the protection criteria are based (a relative degradation of the reference situation e.g. 0.45 dB).

In entering a network provisionally into the List, the reference situation of “victim” networks with which coordination is not completed is not updated. In respect of Appendix 30B, the reference situation is updated when changing the recording from provisional to definitive, i.e. after agreement is reached.

In Appendices 30 and 30A, 4.1.18bis prescribes that as long as the recording is provisional the reference situation of the “victim” network is not updated. However, Appendices 30 and 30A does not prescribe what will happen to the reference situation of the victim network when changing the recording from provisional to definitive, i.e. after four months without complaints about harmful interference.

There may be many reasons why harmful interference does not occur during the first four months of operation, e.g. during this period, the “victim” network may not operate with its most sensitive characteristics (use of larger antennas, modulation/coding that is more robust, e.i.r.p. higher than the minimum values, …) or the interfering network may not operate with its most interfering characteristics (lower EIRPs, transponders with no customers, steerable beams pointing in another direction, …..).

However, if at the end of this four-month period, the reference situation of the “victim” network was updated to incorporate the full interference from the network to which it has not given its agreement, his could severely affect the reference situation of the “victim” network and other later filings could impose significantly more interference upon the “victim” network before exceeding the relative degradation which triggers coordination. As a result, the “victim” network might find itself with reduced protection due to a network to which it has not given its agreement.

In preparations for WRC-15 it was too late to have this issue raised and captured in the CPM report. Instead , CEPT proposed that this issue could be resolved through an RRB decision. Following this advice, this issue was brought to the attention of RRB-70 meeting in October 2015 [RRB-70/10](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-RRB15.3-C-0010), requesting that a Rule of Procedure be prepared to outline the desired practice to be followed by the Bureau. RRB-70 however was of the view that such a RoP would consist in a change of the Radio Regulations and therefore was outside the authority of the RRB.

Following this decision, a late contribution [WRC15/169](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WRC15-C-0169) on this issue was submitted to WRC-15. Since this proposal was made directly to the Conference with no previous studies, WRC-15 decided that “….it was felt that further study of this issue is required if this current practice is to be changed. ITU-R is therefore invited to study this issue under the standing Agenda item 7 with the aim of finding an appropriate regulatory and technical solution to this issue.”

Therefore, this issue was raised again at the first CPG PTB meeting in this study period in June 2016 suggesting regulatory changes, and submitted a multi-country input contribution to the 2nd WP 4A meeting in September-October 2016 co-signed by Germany, Spain, France, Luxembourg, Norway and Sweden. The 2nd meeting of WP 4A in September-October 2016 received this multi-country contribution [4A/183](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0183) and the WP 4A meeting agreed to establish this issue as a new issue G under Agenda item 7.

At its February 2017 meeting PTB received the Norwegian contribution PTB(17)14 portraying the same proposal in the draft CPM format suggesting one method to satisfy the agenda item, proposing to submit it to WP 4A as a CEPT contribution. At CPG19-3, it was decided to submit it to WP 4A noting that the Russian Federation could not support the preliminary CEPT position nor this CEPT contribution to ITU-R WP 4A. The Netherlands expressed no objection to submit the proposed document but informed the CPG meeting that it will submit alternative options to solve issue G to the next WP4A meeting.

The 3rd meeting of WP 4A in May 2017 received five contributions on Issue G, including the CEPT input contribution 4A/243 submitted by Norway. The other four contributions were from Japan, The Netherlands, US, and one contribution from Bulgaria including some opposition to the preliminary CEPT position and the proposed method from CEPT. The CEPT Coordinator therefore called for a coordination meeting on behalf of CPG to discuss the diverging views between CEPT and Bulgaria in an attempt to amend the preliminary CEPT position to reach further agreement within CEPT. The CEPT Coordinator informed the coordination meeting attendees of the preliminary CEPT position and the general CPG working methods to be followed by administrations. Nevertheless, it was concluded that an agreement was not possible to reach prior to the WP 4A meeting discussions of the issue. The same conclusion has been drawn thereafter, clarifying that Bulgaria doesn’t support the preliminary CEPT position.

The 4rd meeting of WP 4A in October 2017 received three contributions on this issue from Norway, Bulgaria and Japan containing partially conflicting proposed revisions to the draft CPM text and the WP 4A output Working Document towards preliminary draft CPM text consisted of a compilation of the three input contributions. The meeting also decided to clarify that all the proposed changes are only relevant for Regions 1 and 3 by amending the title of Issue G.

The 5th meeting of WP 4A in February 2018 received four inputs on this issue portraying deviating proposals, from Iran, Japan and two inputs from Bulgaria. Hence the WP 4A Chairman’s Report 4A/675 concludes that “The topic of updating the Regions 1 and 3 RR Appendix 30/30A reference situation when a provisionally recorded frequency assignment becomes definitive remains quite controversial.” In addition, a new potential Method was discussed during the meeting that would to allow administrations with potentially affected networks to either having the reference situation updated or not, when a provisionally recorded assignment is changed to definitive. As no official input was received to the meeting proposing this Method, it was not included in the WD towards draft CPM text, but WP 4A members were encouraged to pursue this idea for the next meeting of WP 4A. Therefore, CEPT submitted a document developing a regulatory solution to this effect to the next meeting of WP 4A.

The 6th meeting of WP 4A in July 2018 received three inputs, out of one was this CEPT agreed input offering this regulatory text on the already debated new solution. The three inputs and further meeting discussions resolved the various editor’s notes and conflicting points of view in the previous draft CPM text. Some clarification was made to the No Change Method C, and the square bracketed value in Method B was resolved by an input document from Bulgaria. With these changes a finalized draft CPM text was agreed and captured in [Annex 36](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N36%21MSW-E.docx) to the Chairman’s Report 4A/826, containing three Methods to satisfy the issue:

* Method G1 is the CEPT proposal to modify § 4.1.18bis of Appendices 30 and 30A noting that while there is still disagreement, the reference situation of the interfered-with network should be updated in consultation with, and only with the agreement of, the affected administration. This method replaces the method G1 at previous WP 4A meetings
* Method G2 proposes to modify § 4.1.18 and § 4.1.18bis of Appendices 30 and 30A. The method includes several proposed modifications to § 4.1.18; to provide the coordination correspondence, for both assignments to operate with the notified parameters values, and to include the new network to in the Regions 1 and 3 List if the EPM degradation is less than 5 dB. The proposed modifications to § 4.1.18bis portrays which further actions the notifying administration of the new network shall undertake, including measurements sent to the Bureau as specified in a new Resolution. This method is supported by Bulgaria.
* Method G3 proposes No Change to the RR

#  List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* Document [RRB 70/10](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-RRB15.3-C-0010) – Norwegian input to RRB
* Document [WRC15/169](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WRC15-C-0169) – Norwegian input to WRC-15
* Section 3.14 of [WRC-15/504](http://www.itu.int/md/R15-WRC15-C-0504/en) – Minutes of the seventh Plenary meeting on the 20 November 2015

* [Annex 36](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N36%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting
* [PTB(18)030](https://www.cept.org/Documents/cpg-pt-b/42352/ptb-18-030_ai-7-issue-g) and [PTB(18)031](https://www.cept.org/Documents/cpg-pt-b/42353/ptb-18-031_revision-off-draft-cept-brief-on-ai-7-issue-g) – French PTB#6 input contributions

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position if needed and develop a draft European Common Proposal (ECP)

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support further studies of the possible modification to paragraphs. 4.1.18 and 4.1.18bis of RR Appendices 30 and 30A without adversely affecting the Plan while taking into account the implication of the modification on the assignments in the List.

ATU (15 September 2017)

Support studies. It was noted that the current 4 months could be inadequate to ensure the any level of protection of existing and incoming networks. A solution which involves agreement between existing and incoming networks is preferred.

Arab Group (11 April 2018)

* Follow-up studies
* Initial support Method A

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP).

This is Issue is at the stage of DIAP, supported by B and USA. The DIAP is NOC with the explanation that there are notable differences between the application of the procedures § 4.2.21A for the Region 2 BSS and feeder-link Plans and the application of § 4.1.18 for the Regions 1 and 3 List, therefore NOC is needed for Region 2. For example, for Regions 1 and 3, § 4.1.18 may be applied to Regions 1 and 3 List assignments or pending List modifications or terrestrial or FSS assignments, while in Region 2, § 4.2.21A is applied in a much more limited fashion, solely to terrestrial or FSS or unplanned BSS assignments.

RCC (4 October 2018)

The RCC Administrations consider it unreasonable to modify No. 4.1.18 of RR Appendices 30 and 30A, where the reference situation of the victim satellite network would be updated only after the agreement is reached between the Administration notifying the network and the Administration notifying interfering new network (Method G3).

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (13 September 2017)

Issues B, C and E through G do not concern SFCG as they pertain to the FSS and BSS Plans.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE H: Modifications to RR Appendix 4 data elements to be provided for NON-GSO satellite SYSTEMS not subject to the procedures of Section II of RR Article 9

# ISSUE H

Issue H addresses the requirement to provide additional Appendix 4 data elements to enhance the capability of administrations to model non-GSO satellite orbits based on the information provided in the API publications for satellite system not subject to coordination.

# Preliminary CEPT position

CEPT supports the only method proposed for agenda item 7 Issue H.

# Background

The 3rd meeting of WP 4A in May 2017 received a Canadian input contribution 4A/308 proposing Administrations to provide BR additional Appendix 4 data elements for non-GSO systems not subject to coordination in order for such non-GSO systems to be more precisely modelled in terms of the constellation configurations and orbital planes.

Under the current RR Appendix 4, the following data elements are required for this specific case:

1. Item A.4.b.4.a, the angle of inclination of the orbital plane with respect to the Earth’s equatorial Plane;
2. Item A.4.b.4.c, the period;
3. Item A.4.b.4.d, the altitude, in kilometers, of the apogee of the space station, and
4. Item A.4.b.4.e, the altitude, in kilometers, of the perigee of the space station.

It was demonstrated in the meeting output Annex [28](http://www.itu.int/md/dologin_md.asp?lang=en&id=R15-WP4A-C-0364!N28!MSW-E) of 4A/364 that it is not possible to describe a unique orbit or satellite trajectory based only on these four data elements. Hence it was agreed to initiate a new issue H under Agenda item 7 based on the proposal in order to:

* Examine whether the current RR Appendix 4 data elements relating to the orbits are sufficient to model NGSO satellite networks/systems, and
* Propose potential modifications to RR Appendix 4, as appropriate.

The 4th meeting of WP 4A in October 2017 considered another Canadian input document ([4A/414](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0414)) related to this issue. Upon a request from CEPT, the meeting decided to split this into two separate issues, now labelled Issue H and Issue I. The meeting advanced the development of two separate Working Documents towards draft CPM texts on these issues and sent a Liaison Statement to WPs 4C, 5A, 7B and 7C for action in order to receive their views on these issues and the referenced Working Documents.

The 5th meeting of WP 4A in February 2018 considered yet another Canadian input document ([4A/635](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R15-WP4A-C-0635)) suggesting further modifications to the draft CPM text including offering regulatory and procedural considerations. The meeting also received a reply Liaison Statement from WP 4C noting that WP 4C is pleased to see that issue H within WP 4A now appears to be limited to the potential for changes in the RR Appendix 4 information that is to be submitted for non-GSO system frequency assignments that are not subject to coordination under Section II of RR Article 9, and if this continues to be the recommended approach of WP 4A for issue H, WP 4C has no further comment from the perspective of the RNSS.

The 6th meeting of WP 4A in July 2018 received a joint answer from WP 7B and 7C indicating that it would be valuable to have at the API stage the information on the LTAN (Local Time of the Ascending ode) if a sun-synchronous orbit is used, as this parameter is key to assess the compatibility between non-GSO EESS systems.Issue H is therefore limited to addressing the requirement to provide additional Appendix 4 data elements to enhance the capability of administrations to model non-GSO satellite orbits based on the information provided in the API publications for satellite system not subject to coordination. WP 4A concluded that in order to assess the impact of the limited information on the ability to model properly NGSO satellite orbit, there is a need to consider the different type of orbits case by case. Only one method to satisfy the issue has been identified, proposing to include the following new items in RR Appendix 4 for APIs:

* Items A.4.b.4.h (initial phase angle at a reference time) and A.4.b.4.i (argument of the perigee, which can be set to 0 for any circular or equatorial orbits). It should be noted that these items are currently required for CR/Cs for frequency assignments to non-GSO satellite systems in bands subject to coordination under Section II of RR Article 9.
* Item A.4.b.4.j (longitudes of the ascending node for all orbital planes will be required at the same reference time). It should be noted that this item is currently required for the evaluation of the epfd in some bands. Furthermore, although there is a requirement to provide a date and a time in association with this item (see items A.4.b.4.k and A.4.b.4.l), it does not appear to be critical in the assessment of the epfd nor the identification of potential scenario of interference. As a result, the longitude of the ascending node does not have to be associated with a specific date and time to be useful for modeling non-GSO satellite systems as long as the same reference time is used when providing this information (i.e.: the longitude of the ascending node at the reference time t = 0 without further indication).

The above items would only be mandatory for constellation-type non-GSO satellite systems, as shown by a new RR Appendix 4 item.

It is also proposed to add the following new items in RR Appendix 4 for APIs and notifications for frequency assignments to non-GSO satellite systems in bands not subject to coordination under Section II of RR Article 9:

* New mandatory item A.4.b.4.m, identifying whether the orbit is sun-synchronous or not.
* New optional item A.4.b.4.n, providing the Local Time of the Ascending Node (LTAN) for sun-synchronous orbits.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 37](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N37%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and a draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support further study on this Issue.

ATU (15 September 2017)

Support studies considering the potential benefit of this issue to developing countries.

Arab Group (11 April 2018)

Support change Appendix 4 for NGSO information.

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This is Issue is at the stage of PV with content from Canada and Mexico.

Canada supports the addition of the following data elements in Appendix 4 for frequency assignments to non-GSO satellite service not subject to section II of Article 9:

* For elliptical orbit, the argument of the perigee;
* For constellation, the angular separation between two consecutive ascending nodes, the angular separation between two consecutive satellites in the same orbital plane, both angles measured from the centre of the Earth, and the angular separation between two satellites in two adjacent planes measured from the centre of the Earth in the ascending direction.

Mexico supports the ITU-R studies to identify the information required when filing an API for non-GSO systems not subject to the procedures of Section II of RR Article 9, which enables Administrations to identify possible interference scenarios, taking into account the flexibility that may be required for non-GSO satellites with short duration missions and satellites for scientific or experimental purposes.

RCC (4 October 2018)

The RCC Administrations support modification of data of the RR Appendix 4 submitted for new non-GSO systems.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (August 2018)

This issue introduces additional orbital data in the NGSO API describing a non-GSO satellite when submitting an API and/or CR/C package, for sun synchronous satellites, as the orbital elements for such satellites are mission dependant and would be known at the API stage. This would allow the proper modelling of the orbit of new satellite network filings and may also be of use to SFCG members. SFCG supports the initiative which is the only Method in the draft CPM text.

At the July meeting of WP 4A, several Administrations have proposed a new issue to address short-duration missions. SFCG does not support any simplification of the Radio Regulations that would have a negative impact on the use of the bands such as the 2 GHz data links bands for EESS and SRS.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE I: Additional RR Appendix 4 data items to be provided for non-geostationary satellite systems with multiple orbital planes

# ISSUE I

Issue I addresses the requirement to provide additional Appendix 4 data elements to enhance the capability of administrations to model non-GSO satellite networks or systems based on the information provided in the API and CR/C publications, as applicable.

# Preliminary CEPT position

CEPT supports to further study the impact of this proposal in detail before taking any action.

# Background

WRC-15 took a decision related to the Rules o Procedures on the Receivability of forms of notice which the BR Director used to prepare a RoP to address this issue. It was subsequently approved by the RRB and contained in the latest version of the RoP as an asterisk note to the title, as follows:

“For the submission of a request for coordination under No. 9.30 related to a non-GSO satellite network or system, the notice will be receivable only in the cases described below:

1. satellite systems with one (or more than one) set(s) of orbital characteristics and inclination value(s) with all frequency assignments to be operated simultaneously; and,
2. satellite systems with more than one set of orbital characteristics and inclination values with, however, a clear indication that the different sub-sets of orbital characteristics would be mutually exclusive; in other terms, frequency assignments to the satellite system would be operated on one of the sub-sets of orbital parameters to be determined at the notification and recording stage of the satellite system at the latest.”

This RoP relates to this issue of configurations within a single non-GSO notice and how the notice should be treated, either as one “constellation” operating its frequency assignments simultaneously or multiple “constellations” operating its frequency assignments separately.

The 3rd meeting of WP 4A in May 2017 received a Canadian input contribution proposing Administrations to provide BR additional Appendix 4 data elements for non-GSO systems not subject to coordination in order for such non-GSO systems to be more precisely modelled in terms of the constellation configurations and orbital planes.

Under the current RR Appendix 4, four data elements are required for this specific case but it was demonstrated in the meeting that it is not possible to describe a unique orbit or satellite trajectory based only on these four data elements. Hence it was agreed to initiate a new issue H under Agenda item 7 based on the proposal in order to:

* Examine whether the current RR Appendix 4 data elements relating to the orbits are sufficient to model NGSO satellite networks/systems, and
* Propose potential modifications to RR Appendix 4, as appropriate.

The 4th meeting of WP 4A in October 2017 considered another Canadian input document further developing this issue. However, upon a request from CEPT the meeting decided to split this into two separate issues, now labelled Issue H and Issue I. The meeting therefore advanced the development of two separate Working Documents towards draft CPM texts on these issues and sent a Liaison Statement to WPs 4C, 5A, 7B and 7C for action in order to receive their views on these issues and the referenced Working Documents.

The modelling of the orbit of satellites in non-GSO systems requires significantly more information than a GSO satellite network. Recent analysis performed on AIs and CR/Cs for non-GSO satellite networks or systems as published in BR IFICs have shown that there may be a need for additional information in order to properly model the satellite orbits. As under the current Appendix 4, frequency assignments can be linked to multiple orbital planes in a single API or CR/C as appropriate. Therefore, the challenge for potentially affected administrations are to be able to determine if the API or CR/C is describing a single NGSO system, or describing a multiple potential configuration of a single NGSO system to be implemented. Ultimately, the implementation plan has to be communicated to the Bureau so currently the Bureau is seeking this information from the notifying administration by letters after the receipt of an API or a CR/C filing containing multiple orbital planes. Hence, one potential improvement avoiding unnecessary correspondence may be to instead provide the relevant information in the initial submission to the Bureau.

Only one method to satisfy the issue has been identified, proposing to include two new items in RR Appendix 4 to be required in the API or CR/C as appropriate regarding the treatment of the multiple orbital planes:

* Number of configurations for the NGSO satellite systems when the filing contains more than one orbital planes
* Identification of all the orbital planes for each configuration if the number of configurations are more than one

The 5th meeting of WP 4A in February 2018 considered yet another Canadian input document suggesting further modifications to the draft CPM text including regulatory and procedural considerations. The meeting also received a reply Liaison Statement from WP 4C noting that for the RNSS, there is no need for new data elements in RR Appendix 4 to treat multiple orbital planes so WP 4C is of the view that the RNSS should be excluded from any action under Issue I. After some discussion and further development of the Canadian input contribution two outputs were drafted; preliminary draft CPM text and a reply LS to WP 4C noting that WP 4A understands that it is the view of WP 4C that there is no need for new data elements in RR Appendix 4 to address the possibility of multiple configurations for the RNSS and therefore, RNSS should be excluded from any action under Issue I. However, the only additional RR Appendix 4 data requirement for an RNSS system would be to provide an indication under new data item A.4.b.1.a that the multiple orbital planes of an RNSS system correspond to a single system configuration. This would continue to include in-orbit spares/back-up satellites in the coordinated planes. Considering this, WP 4A concluded that it is not necessary to specifically exclude RNSS from Issue I as it is currently developed.

The 6th meeting of WP 4A in July 2018 considered four input documents, including LS from 7B and 7C, and from 4C, as well as inputs providing draft CPM texts for the Executive summary, several basically editorial changes throughout, and improvements to the RR Appendix 4 data element descriptions. With these changes, draft CPM text was agreed and captured in in [Annex 38](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N38%21MSW-E.docx) to the Chairman’s Report 4A/826 with only one method to satisfy the issue including the two proposed changes to RR Appendix 4.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 38](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N38%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support further study on this Issue.

ATU (date of proposal)

Arab Group (11 April 2018)

Support change Appendix 4 for NGSO information

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This is Issue is at the stage of PP from Canada. It supports the addition of two data elements to Appendix 4 to understand the relationship between the various orbital planes.

RCC (4 October 2018)

The RCC Administrations support insertion into RR Appendix 4 additional data elements submitted for new non-GSO systems with several orbital planes determining whether a satellite system is a multiple configurations that will operate simultaneously or it contains multiple configurations that are mutually exclusive.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE J: Modification of Section 1, Annex 1 of RR AP30, pfd limit

# ISSUE J

Issue J is considering § 5.2.1d) of RR Appendix 30, specifying the limit of −103.6 dB(W/(m2 · 27 MHz)), could be exceeded under some conditions and thereby enabling new broadcasting satellite services like UHDTV to be provided.

# Preliminary CEPT position

CEPT supports to further study the impact of this proposal in detail before taking any action.

# Background

The 4th meeting of WP 4A in October 2017 received a Japanese input contribution (4A/398) which further developed their initial proposal presented at the 3rd meeting of WP 4A in May 2017 proposing that § 5.2.1 d) of RR Appendix 30, specifying the limit of −103.6 dB(W/(m2·27 MHz)), could be exceeded under some conditions and thereby enabling new broadcasting satellite services like UHDTV to be provided. The input added conditions that:

* the pfd exceedance from -103.6 dB(W/(m2·27 MHz)) is only allowed for the notifying administration over its national territory and is not applicable to networks submitted by an international satellite organization or an administration that acts on behalf of a group of named administrations.
* to ensure the protection of services in adjacent bands, the frequency assignment should not overlap with the Regions 1 and 3 guardbands

BR clarified that the pfd levels will not be checked over sea areas so unfavourable findings will only be given if -103.6 dB(W/(m2·27 MHz)) is exceeded over the landmass of neighbouring countries. With these improvements, the 4th meeting of WP 4A agreed for the Japanese proposal to become a new issue under AI 7. The WD towards draft CPM text is annexed to the Chairman’s Report ([Annex 42](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0519%21N42%21MSW-E.docx) of 4A/519).

The 5th meeting of WP 4A in February 2018 received input contributions from Japan, Korea and Iran. After some discussion and merging of the input contributions, preliminary draft CPM text was developed with amended regulatory considerations in the proposed Method A and a No Change Method B since the pfd limit referred to in the first paragraph of Section 1 of Annex 1 to Appendix 30 of the Radio Regulations is a hard limit that shall not be exceeded in order to protect BSS assignments from interference that may be caused by BSS networks located outside an arc of ± 9° around a wanted BSS network.

The 6th meeting of WP 4A in July 2018 received one input contribution from the Director of the BR providing a description of the BR process for pfd examination. It was used to modify the previous text and draft CPM text was agreed, finalized and captured in [Annex 39](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N39%21MSW-E.docx) to the Chairman’s Report 4A/826. The draft CPM text contains two Methods to satisfy the issue:

* Method J1 is based on the Japanese initiative modifying § 5.2.1d) of RR Appendix 30, allowing to exceed the limit of −103.6 dB(W/(m2 · 27 MHz)) under some conditions
* Method J2 proposes No Change to the RR

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 39](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N39%21MSW-E.docx) of 4A/826 –Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP) if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support further studies of the possible modification to Section 1 of Annex 1 of RR AP30 to allow a specified power flux-density to be exceeded within the national territory under the jurisdiction of the notifying administration.

See also Background material relating to exceedance of pfd over territory under the jurisdiction of other administrations.

ATU (date of proposal)

Arab Group (date of proposal)

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This is Issue is at the stage of PV. Mexico supports conducting and concluding the ITU-R studies to ascertain if it is possible to exceed the power flux-density (pfd) limit in the territory of a notifying Administration of a network, taking into consideration the protection of border areas, the territory of other Administrations, and BSS allocations.

RCC (4 October 2018)

The RCC Administrations do not support modification of a hard pfd limit (−103.6 dB(W/(m2· 27 MHz), identified in Annex 1 to RR Appendix 30, and consider that to ensure protection of assignments to systems in the broadcasting-satellite service from interference caused by networks in the broadcasting-satellite service located outside of the coordination arc, hard pfd limit identified in Section 1, Annex 1 to RR Appendix 30 shall be observed, even if a test point is located in the territory of a notifying administration (Method J2).

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE K: Difficulties for Part B examinations under § 4.1.12 or 4.2.16 of RR Appendices 30 and 30A and § 6.21 c) of RR Appendix 30B

# ISSUE K

Issue K is addressing difficulties in Part B examinations for Part B submissions by proposing that the examination under RR Appendix 30B § 6.21 c) is to be performed in two steps, if needed, to better reflect the actual situation and thus increase the efficiency of spectrum use.

# Preliminary CEPT position

CEPT supports that the examination under § 4.1.12 or 4.2.16 of RR Appendices 30 and 30A and § 6.21 c) of RR Appendix 30B is performed in two steps, if needed, to better reflect the actual situation and to enable newcomers to benefit from the reduction of satellite networks parameters and characteristics of other networks emerging during the coordination process, and thus increase the efficiency of spectrum use, as outlined in the single method in the draft CPM text.

CEPT believes that this method avoids over protection of earlier networks based on part A characteristics which could be obsolete and no longer valid due to changes during the coordination process and in entering into the List (Part B). This method would hence enable spectrum efficiency by addressing potential difficulties encountered by notifying administrations in the Part B examination to enter into the List with favourable findings.

CEPT support the overall aim to facilitate entering new assignments into the RR Appendix 30B List and to facilitate coordination of networks for newcomers which the proposal in Issue K targets.

# Background

CEPT has addressed the issue which service area of affected networks submitted under RR Appendix 30B should be taken into account during the process of entering a new assignment into the Appendix 30B List: intended or definitive (PTB(17)04). This contribution proposes to clarify current Radio Regulations by the introduction of the new Rule of procedure to allow take into account latest, recorded to the List service area of affected assignments in order to better reflect the actual situation and thus increase the efficiency of spectrum use.

Such a CEPT contribution was submitted by Belarus ([4A/241](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0241%21%21MSW-E.docx)) to the 3rd meeting of WP 4A in May 2017. The consideration of this issue was there combined with a discussion of an input contribution from Saudi Arabia, Bahrain, Djibouti, Egypt, Oman ([4A/322](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0322%21%21MSW-E.docx)) on the same topic of Appendix 30B Part B examination. However, this document proposed to use the Part B characteristics for the §6.21 c) of the Appendix 30B examination, if this has been submitted. The Bureau confirmed in the meeting that this could lead to uncertainties in the coordination process. Hence, this document was transferred to a Working Document attached to the WP 4A Chairman’s report calling for further studies while the WP 4A meeting supported the CEPT contribution and agreed to produce a Note to the BR Director based on the CEPT input ([Annex 45](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0364%21N45%21MSW-E.docx) to Doc. 4A/364) requesting the Director to consider this issue with a view to addressing the concerns raised but there was no need to establish it as an AI 7 issue. However, the 4th meeting of WP 4A in October 2017 received two inputs from the BR which explained the difficulties associated with both of these two proposals including that they would require modification to the BR software and increase the complexity and processing time.

The 4th meeting of WP 4A also received an input from AsiaSat addressing these difficulties by proposing that the examination be performed in two steps. First with the Part A characteristics under RR Appendix 30B § 6.21 c) like the current practice, and if this examination of Part B of a submitted network is favourable, the senior network is considered as not being affected like today and no further examination will be conducted. But if unfavorable finding is received, then the BR will perform the second examination with regards to the Part B characteristics of the senior network and if this further examination gives favourable findings, the senior network is considered as not being affected in examination under § 6.21 c) and would give favourable findings to the submitted network. This method avoids over protection of earlier networks based on its Part A characteristics which could be obsolete and no longer valid and would hence enable spectrum efficiency by addressing potential difficulties encountered by notifying administration in the Part B examination to enter into the List with favourable findings.

BR noted that this method introducing a second examination would increase its workload but AsiaSat provided clarifications that this increase in workload should not be dramatic. The meeting agreed for the Asiasat proposal to become a new issue under AI 7.

The 5th meeting of WP 4A in February 2018 received input contributions from US and Papa New Guinea, both supporting Issue K but also proposing to expand the scope of issue K into addressing Appendices 30 and 30A by applying the same principle. Both inputs proposed to also include a potential additional Part B examination of junior networks under § 5.2.1 of RR Appendices 30 and 30A in addition to § 6.21 c) of RR Appendix 30B. However, this regulatory solution was questioned by the BR and after some discussion and further improvement of the inputs with support of the BR, it is instead proposed to address this additional examination under § 4.1.12 for Regions 1 and 3 or § 4.2.16 for Region 2 of RR Appendices 30 and 30A in addition to in § 6.21 c) of RR Appendix 30B.

At the 6th meeting of WP 4A in July 2018 only one input contribution was received, proposing to replace a single figure in the document with an improved, corrected figure. With that minor change, draft CPM text was easily agreed, finalized and captured in Annex 40 to the Chairman’s Report 4A/826 consisting only of this one method.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 40](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N40%21MSW-E.docx) of 4A/6826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP) if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (16 March 2018)

APT Members support further consideration of Method A developed at the meeting of Working Party 4A in October 2017.

ATU (date of proposal)

Arab Group (11 April 2018)

* Support Appendix 30B modification, according to ASMG submission.
* Follow up studies for the proposed Appendix30/30A modifications

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP).

This is Issue is at the stage of PP from USA. For Regions 1 and 3, this PP adds one more examination under § 4.1.12 of RR Appendix 30 such that should any remaining affected networks whose assignments have been entered in the List before the submission under § 4.1.12 of RR Appendix 30, the Bureau shall further examine if the remaining corresponding assignments in the List are still considered as being affected. The network being examined will not be subject to any new requirements beyond those specified in its Part A publication. For Region 2, this PP adds one more examination under § 4.2.16 of RR Appendix 30 such that should any remaining affected networks in the Plan before the submission under §4.2.16 of RR Appendix 30, the Bureau shall further examine if the remaining corresponding assignments in the Plan are still considered as being affected. The network being examined will not be subject to any new requirements beyond those specified in its Part A publication.

RCC (4 October 2018)

The RCC Administrations support re-examination of notices under §§ 4.1.12 or 4.2.16 of Appendices 30 and 30А and § 6.21 с) of RR Appendix 30B at the stage of publication relating to IFIC Part B in the case when networks which were the basis for the unfavourable finding were included in the List with decreased by results of coordination characteristics.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE L: Update to Appendix 4 data elements required for RR Article 22 epfd verification after revision of Recommendation ITU-R S.1503

# ISSUE L

Issue L is considering elements for update of RR Appendix 4 to accommodate the update of Recommendation ITU-R S.1503, specifically for 4 data elements required for RR Article 22 epfd verification.

# Preliminary CEPT position

CEPT supports revision of RR Appendix 4 as a consequence to the Recommendation ITU-R S.1503-3 coming into force, as outlined in the single method in the draft CPM text.

# Background

A revision to this Recommendation from version ITU-R [S.1503](https://www.itu.int/rec/R-REC-S.1503/en)-2 to ITU-R S.1503-3 was approved at the meeting of SG 4 in October 2017. This revised Recommendation requires additional parameters that are not currently available in Appendix 4 of the Radio Regulations. In addition, a number of issues, such as duplication and inconsistencies, have been identified with the relevant fields in the current version of RR Appendix 4.

The WP 4A Sub-Working Group 4A2e on FSS/BSS intra-service sharing, further discussed these issues related to the implementation of Recommendation ITU-R S.1503 at the 5th meeting of WP 4A in February 2018. In this work, a consolidated text on elements for update of RR Appendix 4 to accommodate the update of Recommendation ITU-R S.1503 was compiled and conveyed to the WG of Plenary, and the WP 4A meeting decided to establish the new Issue L under Agenda item 7 focusing on those parts of Appendix 4 identified as for stations or space station operating in a frequency band subject to RR Nos. 22.5C, 22.5D or 22.5F. This text was captured in a Working Document towards preliminary draft CPM text.

Also, it was decided to initiate a WD toward a Draft New Report on “elements to be considered during implementation of Recommendation ITU-R S.1503” that could be a reference for current implementation as well as a vehicle to hold ideas for a future update to this Recommendation, captured in a Working Document attached as [Annex 23](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0675%21N23%21MSW-E.docx) to the Chairman’s Report 4A/675. Otherwise, it was noted that any purely editorial changes required to any Recommendation under the responsibility of Study Group 4, including Recommendation ITU-R S.1503 where some editorial updates have already been identified in some of the equations, could be provided directly to the Study Group 4 Counsellor by e-mail.

To the 6th meeting of WP 4A in July 2018, no inputs were received on this issue and the previously developed text was agreed as draft CPM text and captured in [Annex 41](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N41%21MSW-E.docx) to the Chairman’s Report 4A/826 with only one method to satisfy the issue portraying the changes proposed to RR Appendix 4. In addition, a WD towards a preliminary draft revision of Recommendation ITU-R S.1503-3 presenting a functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite service systems or networks with limits contained in Article 22 of the Radio Regulations, was captured in [Annex 9](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N09%21MSW-E.docx) to the Chairman’s Report 4A/826.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 41](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N41%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting
* [Annex 23](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0675%21N23%21MSW-E.docx) of 4A/675 – WD on elements to be considered to support application of Recommendation ITU-R S.1503-3 or for the future revision of Recommendation ITU-R S.1503-3 - Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite system networks with limits contained in Article 22 of the Radio Regulations
* [Annex 9](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N09%21MSW-E.docx) of 4A/826 - WD towards a preliminary draft revision of Recommendation ITU-R S.1503-3 - Functional description to be used in developing software tools for determining conformity of non-geostationary-satellite orbit fixed-satellite service systems or networks with limits contained in Article 22 of the Radio Regulations

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP), if needed

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (date of proposal)

ATU (date of proposal)

Arab Group (11 April 2018)

Support updates to Appendix 4

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). This is Issue is at the stage of PV. Mexico supports ITU-R studies on RR Article 22 in accordance with the revision implemented in ITU-R Recommendation S.1503 and thus determine the additional parameters that must be included in RR Appendix 4 so that both can be consistent.

RCC (4 October)

The RCC Administrations do not oppose updating data elements of RR Appendix 4 required in order to verify epfd levels identified in RR Article 22, in accordance with current wording of Recommendation ITU – R S.1503-3.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (date of proposal)

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)

1. ISSUE M: Simplified regulatory regime for non-GSO satellite systems with short duration missions

# ISSUE M

Issue M is a new issue under Agenda item 7 initiated at the 6th meeting of WP 4A in July 2018 considering a draft new Resolution with a special simplified procedure to be applied for non-GSO satellite systems with short duration missions not subject to Section II of RR Article 9.

# Preliminary CEPT position

CEPT supports the regulatory framework in the draft CPM text method where the short lifetimes of non-GSO space stations are taken into account. CEPT proposes to introduce this simplified regulatory regime for the advance publication, notification and recording procedures for non-GSO satellite systems with short duration missions not subject to Section II of RR Article 9 and in that respect supports the principles of the draft new WRC Resolution together with the associated regulatory regime.

This regulatory regime for non-GSO satellite systems with short duration missions not subject to Section II of RR Article 9 shall be based on the following principles:

* The satellite operator shall stop the emission of the space station in case of harmful interference experienced by current assignments such in line with RR No. 22.1;
* The API and the corresponding notification shall be accurate and complete regarding the orbital parameters and the number of carriers;
* The amount of time of 4 months for comments raised by administrations following a publication of an API shall not be changed;
* The API associated to a limited number of small satellites (maximum of 10) shall be unique, shall not be duplicated or re-used; the maximum duration is 3 years, any extension is prohibited.

# Background

At its meeting in July 2018, ITU-R Working party 4A developed a simplified regulatory regime for non-GSO satellites, also called short duration mission satellites (acronym SDM) and a Resolution was developed. Considering that the size of a satellite is independent of the nature of the service that it is intended to provide, a simplified regulatory regime and a WRC Resolution has been developed for satellites with short duration missions, independent of the size of the satellite. The Resolution indicates the following basic principles:

* A SDM satellite shall not be subject to the application of Section II of Article 9 and shall be subject to the provisions of the Radio Regulations.
* The total number of satellites in a SDM satellite system shall not exceed [10] satellites.
* The maximum period of operation and validity of frequency assignments of a SDM satellite system shall not exceed three years from the date of bringing into use of the frequency assignments, without any possibility of extension, after which the recorded assignments shall be cancelled.

In regards to this simplified regulatory regime it is important to know that the existing provisions of the Radio Regulations for the advance publication and notification of satellites under Articles 9 and 11 do not take account of the short development cycle, the short lifetimes and the typical missions of non-GSO satellites with short duration missions. Therefore, a simplified regulatory regime for the advance publication, notification and recording procedures for non-GSO satellite systems with short duration missions is required. The successful and timely development and operation of non-GSO satellite systems with short duration missions requires 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 organisations, 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 result in difficulties for non-GSO satellite systems with short duration missions to be notified to the ITU. This can have adverse consequences in the management of interference as these satellite systems currently provide a range of services and are not confined to the amateur-satellite service, as was initially the case. A draft new WRC Resolution, together with an associated regulatory regime for non-GSO satellite systems with short duration missions, has been developed to address this issue.

Based on input contributions, ITU-R discussed and developed a simplified regulatory regime for non-GSO satellite systems with short duration missions. This simplified regulatory regime would apply for such systems that are not subject to Section II of RR Article 9. The intent of the simplified regime is to accelerate the timing of the processing of submissions for such networks and systems in order to accommodate their rapid development and deployment cycle. It is understood that this simplified regulatory regime would not result in any special or additional rights for networks or systems using the simplified regime and that the resultant status and protection of networks and systems using the simplified regime would be the same as for any other network or system not subject to Section II of RR Article 9. This simplified regulatory regime is captured in a new WRC Resolution together with an associated regulatory regime for non-GSO satellite systems with short duration missions, in [Annex 42](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N42%21MSW-E.docx) of the WP 4A Chairman’s report 4A/826.

The issue of orbital parameters is very critical. The WRC Resolution shall contain a statement indicating the fact that without the list of complete and accurate orbital parameters, notification is strictly impossible. The fact is that many satellite networks don’t contain these parameters before making the filing. Many times, identical parameters are found for all assignments. This way of doing should be stopped for the benefit of a better satellite coordination.

The issue of space debris should also be raised, in terms of capacity of the space object to be de orbited. According to the legislation of some countries, a space object shall not take more than 25 years to be totally de orbited. Operators shall have to keep in mind the fact these small satellites must be easily de-orbited in order to avoid space debris.

* According to the Orbit/Spectrum International Regulatory Framework needs, the short duration mission satellite and even the smallest space object that will be launched will also be declared to the UNSOOA;
* After the lifetime of the small satellite, the space object should be de orbited, and should comply with the COPUOS international guidelines, and the IADC Space Debris Mitigation Guidelines, in order to fulfil the goals of Article 44 of ITU Constitution (management of Radio frequencies & satellite orbits as limited natural resources);

In addition, CEPT encourages the development of an ITU-R Recommendation for the protection of the low earth orbit, similar to ITU-R S.1003-2 on the environmental protection of the geostationary-satellite orbit.

# List of relevant documents

ITU-Documentation (Recommendations, Reports, other)

* [Annex 42](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826%21N42%21MSW-E.docx) of 4A/826 – Draft CPM text in the Chairman’s Report of the 6th WP 4A meeting
* [Recommendation I TU-R S.1003-2](https://www.itu.int/rec/R-REC-S.1003/en) (12/2010) – Environmental protection of the geostationary-satellite orbit
* Report ITU-R SA.2312-0 - Characteristics, definitions and spectrum requirements of nanosatellites and picosatellites, as well as systems composed of such satellites
* Report ITU-R SA.2348-0 - Current practice and procedures for notifying space networks currently applicable to nanosatellites and picosatellites

CEPT and/or ECC Documentation (Decisions, Recommendations, Reports)

EU Documentation (Directives, Decisions, Recommendations, other), if applicable

# Actions to be taken

* Further develop the preliminary CEPT position and eventually a draft European Common Proposal (ECP)
* Develop an ITU-R Recommendation for the protection of the low earth orbit, similar to ITU-R S.1003-2 on the environmental protection of the geostationary-satellite orbit.

# Relevant information from outside CEPT (examples of these are below)

## European Union (date of proposal)

## Regional telecommunication organisations

APT (date of proposal)

ATU (date of proposal)

Arab Group (date of proposal)

CITEL (July 2018)

There are four stages for CITEL proposals: Preliminary View (PV), Preliminary Proposal (PP), Draft Inter-American Proposal (DIAP), and Inter-American Proposal (IAP). CITEL had not yet addressed this Issue.

RCC (4 October)

The RCC Administrations oppose modifications to RR Article 9 to simplify the regulatory regime for non-GSO systems with short-duration missions.

The RCC Administrations study the procedure of submitting data to the Bureau concerning non-GSO systems with short-duration missions (less than 3 years), not subject to the coordination procedure under Section II of RR Article 9 and possible measures to prevent possible interference to existing and planned assignments.

The RCC Administrations are in favour of maintaining 4-month period for comments by administrations after publishing API for simplified regulatory regime for non-GSO systems.

## International organisations

IATA (date of proposal)

ICAO (date of proposal)

IMO (date of proposal)

SFCG (August 2018)

This issue involves a simplified regulatory regime for short duration missions, defined specifically as mission with less than [10] satellites with period of validity less than three years. SFCG does not support modifying the procedures for filing satellites under RR Articles 9 and 11 unless sufficient safeguards are in place to ensure a simplified and/or expedited filing process cannot be exploited. Further issues such as cost recovery for such as process should also be considered.

WMO and EUMETNET (date of proposal)

## Regional organisations

ESA (date of proposal)

Eurocontrol (date of proposal)

## OTHER INTERNATIONAL AND REGIONAL ORGANISATIONS

EBU (date of proposal)

GSMA (date of proposal)

CRAF (date of proposal)