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| **World Radiocommunication Conference (WRC-19)Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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| PLENARY MEETING | **Addendum 1 toDocument 28(Add.19)-E** |
|  | **28 September 2019** |
|  | **Original: Chinese** |
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| China (People's Republic of) |
| proposals for the work of the conference |
|  |
| Agenda item 7(A) |

7 to consider possible changes, and other options, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution **86 (Rev.WRC-07)**, in order to facilitate rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

7(A) Issue A - Bringing into use of frequency assignments to all non-GSO systems, and consideration of a milestone-based approach for the deployment of non-GSO systems in specific frequency bands and services

# 1 Introduction

The Administration of China is pleased to submit proposals addressing several issues of agenda item 7 of the World Radiocommunication Conference in 2019 (WRC-19). China is also supporting some common proposals developed by the Asia-Pacific Telecommunity (APT).

In preparing the proposals for WRC-19, China has taken into account recent ITU‑R studies and Recommendations, the results of the Second CPM meeting for WRC-19 (CPM19-2), new developments in radiocommunication technology, related service issues and consequential regulatory changes.

# 2 Views and proposals

A number of satellite network regulatory issues were raised and discussed in the previous Working Party 4A (WP 4A) meetings on Regulatory / Procedural Matters. During the WRC-19 study cycle, issues A to K under Agenda item 7 were not identified until CPM19-2 and they are included in the CPM Report to WRC-19. Methods have been proposed to address these issues. Our preliminary views on a number of issues are submitted for consideration in the WRC-19 meeting as follows:

## 1) Issue A: BIU of frequency assignments to non-GSO satellite systems

The World Radiocommunication Conference in 2012 (WRC-12) and the World Radiocommunication Conference in 2015 (WRC-15) adopted into the Radio Regulations a series of specific provisions – including RR No. **11.44B** – that clarified the requirements for bringing into use (BIU) and bringing back into use of the frequency assignments to a space station in a GSO network. However, there are no specific provisions for the BIU for frequency assignments to a space station in a non-GSO satellite system.

Historically, and to this day, the Bureau considers that a frequency assignment to any non-GSO system has been brought into use when one satellite from a planned system in a particular frequency band has been placed into service – irrespective of the number of satellites or of the number of orbital planes indicated in the notification information provided under RR No. **11.2**. According to RR No. **13.12A**, this practice is reflected in the Rules of Procedure for RR No. **11.44** (see Rule of Procedure for No. **11.44**, Section 2 (MOD RRB16/58)).

The BR Director brought to the attention of the WRC-15 in his Report under 9.2 that the conference may wish to consider redefining the notion of BIU for non-GSO satellite networks as this could lead to spectrum warehousing and the problem of so-called “paper satellite networks”. WRC-15 discussed the issue and decided to invite ITU-R to examine, under Agenda item 7, the possible development of regulatory provisions requiring additional milestones beyond those under RR Nos. 11.25 and 11.44 with regard to non-GSO systems.

WP 4A agreed to identify BIU of frequency assignments to non-GSO satellite systems as Issue A. WP 4A has developed a draft CPM Report on studies relating to the BIU 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, and CPM19-2 finalized the CPM Report.

The CPM Report came to two general conclusions, each with multiple options for implementation. First, for BIU of frequency assignments to non-GSO 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, and four options were identified for the period for which the satellite capable of transmitting or receiving the frequency assignments must be deployed in a notified orbital plane. Second, for non-GSO satellite systems in specific bands and frequencies, the CPM Report 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 proposed. The CPM Report also contains a draft new resolution of WRC covering several areas for which there are multiple options.

Views on Issue A:

– Concerning the continuous period for confirming the BIU of frequency assignments to a non-GSO system, China supports Option A with certain changes, which means to keep a continuous period of 90 days for frequency assignments to which the new resolution applies, and no fixed period for frequency assignments to which the new resolution does not apply. This is almost in accordance with the current practice as contained in the Rules of Procedure.

– Regarding milestone scheduling and minimum percentage of satellites required to be deployed to meet the milestone, in order to keep a good balance between the operational requirements related to the deployment of a non-GSO system and the need to prevent spectrum warehousing, China is in favour of Option F, and could accept Option C with minor changes to the minimum percentage of the deployed satellites required to meet the milestone.

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| --- | --- | --- |
| Milestones | Milestone scheduling(Number of years after the end of the seven-year regulatory period or after entry into force of the Resolution, whichever falls later) | Minimum % of the deployed satellites required to meet the milestone |
| 1st | 2 years | 10% |
| 2nd | 4 years | 33% |
| 3rd | 7 years | 100% |

– Regarding the transitional measures, China supports Option 1 for the transition to new regulations. With respect to the commencement date of the milestone process, China is in favour of 23 November 2019 (the first day after the end of the conference), and we could accept any date no later than 1 January 2021.

– Regarding frequency bands and services, China supports that any milestone-based approach should be applicable to FSS/BSS/MSS at least in the specific Ku, Ka and Q/V bands.

– Regarding post-milestone process, China is of the view that there may be a need to ensure the coherence of the Master International Frequency Register (MIFR) with the actually deployed satellites over time, even after the third milestone process.

China proposes the following to WRC-19 for agenda item 7 issue A:

ARTICLE 11

Notification and recording of frequency
assignments1, 2, 3, 4, 5, 6, 7, 8    (WRC‑15)

Section II − Examination of notices and recording of frequency assignments
in the Master Register

MOD CHN/28A19A1/1#50042

11.44The notified date24, MOD 25, MOD 26 of bringing into use of any frequency assignment to a space station of a satellite network or system shall be not later than seven years following the date of receipt by the Bureau of the relevant complete information under No. **9.1** or **9.2** in the case of satellite networks or systems not subject to Section II of Article **9** or under No. **9.1A** in the case of satellite networks or systems subject to Section II of Article **9**. Any frequency assignment not brought into use within the required period shall be cancelled by the Bureau after having informed the administration at least three months before the expiry of this period.     (WRC‑19)

**Reasons:** All options propose similar modification of this provision.

NOC CHN/28A19A1/2#50029

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24 11.44.1

**Reasons:** All options propose similar modification of this provision.

MOD CHN/28A19A1/3#50044

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25 11.44.2The notified date of bringing into use of a frequency assignment to a space station of a satellite network or system shall be the date of the commencement of the continuous period defined in No. **11.44B** or No. **11.44C**, as applicable.    (WRC‑19)

**Reasons:** All options propose similar modification of this provision.

MOD CHN/28A19A1/4#50045

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26 11.44.3, 11.44B.1 and 11.44C.2Upon receipt of this information and whenever it appears from reliable information available that a notified frequency assignment has not been brought into use in accordance with No. **11.44** No. **11.44B**, [MOD] No. **11.44C** or [MOD] No. **11.44C*bis***, as the case may be, the consultation procedures and subsequent applicable course of action prescribed in No. **13.6** shall apply, as appropriate.     (WRC‑19)

**Reasons:** All options propose similar modification of this provision.

MOD CHN/28A19A1/5#50046

11.44C A frequency assignment to a space station in a non-geostationary-satellite orbit subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)** with the “Earth” as the reference body shall be considered as having been brought into use when a space station in the non-geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained on one of the notified orbital planesADD AA of the non‑geostationary satellite system for a continuous period of 90 daysADD BB. The notifying administration shall so inform the Bureau within 30 days from the end of the 90-day periodMOD 26, ADD CC. On receipt of the information sent under this provision, the Bureau shall make that information available on the ITU website as soon as possible and shall publish it in the BR IFIC subsequently.     (WRC‑19)

**Reasons:** For frequency assignments to some non-GSO satellite systems in specific frequency bands and services subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)**,China proposesto keep a continuous period of 90 days. For other frequency assignments to non-GSO satellite systems, China proposes no fixed period.

ADD CHN/28A19A1/6#50047

11.44C*bis*A frequency assignment to a space station in a non-geostationary orbit not subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)** shall be considered as having brought into use when a space station in the non-geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed on one of the notified orbital planes of the non-geostationary satellite systemADD AA, ADD BB. The notifying administration shall so inform the Bureau as soon as possible but not later than 30 days after the end of the period referred to in No. **11.44**. On receipt of the information sent under this provision, the Bureau shall make that information available on the ITU website as soon as possible and shall publish it in the BR IFIC subsequently.      (WRC‑19)

**Reasons:** As indicated above.

ADD CHN/28A19A1/7#50048

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BB 11.44C.2 A frequency assignment to a space station in a non-geostationary-satellite system with a reference body that is not “Earth” shall be considered as having been brought into use when the notifying administration informs the Bureau that a space station with the capability of transmitting or receiving that frequency assignment has been deployed and operated in accordance with the notification information.     (WRC‑19)

**Reasons:** All options propose similar modification of this provision.

ADD CHN/28A19A1/8#50051

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CC 11.44C.3 A frequency assignment to a space station in a non-geostationary satellite orbit with a notified date of bringing into use more than 30 days or 120 days, as the case is, 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 a space station in a notified orbital plane (see also No. **11.44C.1**) with the capability of transmitting or receiving that frequency assignment has been deployed and maintained as provided for in No. **11.44C** 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.     (WRC‑19)

**Reasons:** As indicated above.

MOD CHN/28A19A1/9#50052

11.49 Wherever the use of a recorded frequency assignment to a space station of a satellite network or to all space stations of a non-geostationary satellite system is suspended for a period exceeding six months, the notifying administration shall inform the Bureau of the date on which such use was suspended. When the recorded assignment is brought back into use, the notifying administration shall, subject to the provisions of Nos. **11.49.1**, 11.49.2or 11.49.3, as applicable, so inform the Bureau, as soon as possible. On receipt of the information sent under this provision, the Bureau shall make that information available as soon as possible on the ITU website and shall publish it in the BR IFIC. The date on which the recorded assignment is brought back into use28, ADD DD, ADD EE, ADD FF, ADD G shall be not later than three years from the date on which the use of the frequency assignment was suspended, provided that the notifying administration informs the Bureau of the suspension within six months from the date on which the use was suspended. If the notifying administration informs the Bureau of the suspension more than six months after the date on which the use of the frequency assignment was suspended, this three-year time period shall be reduced. In this case, the amount by which the three-year period shall be reduced shall be equal to the amount of time that has elapsed between the end of the six-month period and the date that the Bureau is informed of the suspension. If the notifying administration informs the Bureau of the suspension more than 21 months after the date on which the use of the frequency assignment was suspended, the frequency assignment shall be cancelled.     (WRC‑19)

**Reasons:** All options propose similar modification of this provision.

NOC CHN/28A19A1/10#50053

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28 11.49.1

**Reasons:** All options propose similar modification of this provision.

ADD CHN/28A19A1/11#50054

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DD11.49.2The date of bringing back into use of a frequency assignment to a space station in the non-geostationary-satellite orbit subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)**, with the “Earth” as the reference body, shall be the date of the commencement of the 90-day period. A frequency assignment to a space station in the non-geostationary-satellite orbit subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)** shall be considered as having been brought back into use when a space station in the non-geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained on one of the notified orbital planes for a continuous period of 90 days. The notifying administration shall so inform the Bureau within 30 days from the end of the 90-day period.     (WRC‑19)

**Reasons:** For frequency assignments to some non-GSO satellite systems in specific frequency bands and services subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)**,China proposesto keep a continuous period of 90 days. For other frequency assignments to non-GSO satellite systems, China proposes no fixed period.

ADD CHN/28A19A1/12#50055

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EE 11.49.3 A frequency assignment to a space station in the non-geostationary satellite orbit not subject to draft new Resolution **[CHN/A7(A)-NGSO-MILESTONES] (WRC‑19)** shall be considered as having been brought back into use when a space station in the non-geostationary satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed on one of the notified orbital planes. The notifying administration shall so inform the Bureau as soon as possible but not later than 30 days after the end of the end of the suspension period as defined in No. **11.49**.     (WRC‑19)

**Reasons:** As indicated above.

ADD CHN/28A19A1/13#50056

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FF 11.49.4 A frequency assignment to a space station in a non-geostationary satellite system with a reference body that is not “Earth” shall be considered as having been brought back into use when the notifying administration informs the Bureau that a space station with the capability of transmitting or receiving that frequency assignment has been deployed and operated in accordance with the notification information.     (WRC‑19)

**Reasons:** All options propose similar modifications to this provision.

ARTICLE 13

Instructions to the Bureau

Section II − Maintenance of the Master Register and of World Plans by the Bureau

ADD CHN/28A19A1/14#50062

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1 13.6.1 See also No. ADD **11.51**, frequency assignments to non-geostationary-satellite systems recorded in the Master Register.     (WRC‑19)

**Reasons:** All options propose similar modifications to this provision.

MOD CHN/28A19A1/15#50061

13.6*b)* whenever it appears from reliable information available that a recorded assignment has not been brought into use, or is no longer in use, or continues to be in use but not in accordance with the notified required characteristicsADD 1 as specified in Appendix **4**, the Bureau shall consult the notifying administration and request clarification as to whether the assignment was brought into use in accordance with the notified characteristics or continues to be in use in accordance with the notified characteristics. Such a request shall include the reason for the query. In the event of a response and subject to the agreement of the notifying administration the Bureau shall cancel, suitably modify, or retain the basic characteristics of the entry. If the notifying administration does not respond within three months, the Bureau shall issue a reminder. In the event the notifying administration does not respond within one month of the first reminder, the Bureau shall issue a second reminder. In the event the notifying administration does not respond within one month of the second reminder, action taken by the Bureau to cancel the entry shall be subject to a decision of the Board. In the event of non-response or disagreement by the notifying administration, the entry will continue to be taken into account by the Bureau when conducting its examinations until the decision to cancel or modify the entry is made by the Board. In the event of a response, the Bureau shall inform the notifying administration of the conclusion reached by the Bureau within three months of the administration’s response. When the Bureau is not in a position to comply with the three-month deadline referred to above, the Bureau shall so inform the notifying administration together with the reasons therefor. In case of disagreement between the notifying administration and the Bureau, the matter shall be carefully investigated by the Board, including taking into account submissions of additional supporting materials from administrations through the Bureau within the deadlines as established by the Board. The application of this provision shall not preclude the application of other provisions of the Radio Regulations.    (WRC‑19)

**Reasons:** All options propose similar modifications to this provision.

ADD CHN/28A19A1/16#50063

DRAFT NEW RESOLUTION [CHN/A7(A)-NGSO-Milestones] (WRC-19)

A milestone-based approach for the implementation of frequency assignments
to space stations in a non-geostationary-orbit satellite system
in certain frequency bands and services

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

considering

*a)* that filings for frequency assignments to non-geostationary satellites systems composed of hundreds to thousands of non-GSO satellites have been received by ITU since 2011 in particular in frequency bands allocated to the fixed-satellite service (FSS) or the mobile-satellite service (MSS);

*b)* that design considerations, availability of launch vehicles to support multiple satellite launches, and other factors mean that notifying administrations may require longer than the regulatory period stipulated in No. **11.44** to complete implementation of non-GSO systems referred to in *considering* *a)*;

*c)* that any discrepancies between the deployed number of orbital planes/satellites per orbital plane of a non-GSO system and the Master Register have, to date, not significantly impinged upon the efficient use of the orbital/spectrum resource in any frequency band used by non-GSO systems;

*d)* that the bringing into use and the recording in the Master International Frequency Register (MIFR) of frequency assignments to space stations in non-GSO systems by the end of the period referred to in No. **11.44** do not require the confirmation by the notifying administration of the deployment of all the satellites associated with these frequency assignments;

*e)* that ITU-R studies have shown that the adoption of a milestone-based approach will provide a regulatory mechanism to help ensure that the MIFR reasonably reflects the actual deployment of such non-GSO satellite systems in certain frequency bands and services, and improve the efficient use of the orbital/spectrum resource in those frequency bands and services;

*f)* that in defining the timeline and objective criteria for the milestone-based approach, there is a need to seek a balance between the prevention of spectrum warehousing, the proper functioning of coordination mechanisms, and the operational requirements related to the deployment of a non-geostationary satellite system;

*g)* that extensions to milestones are undesirable, as they create uncertainty with respect to the non-GSO FSS system with which other systems must coordinate,

recognizing

*a)* No. [MOD] **11.44C** addresses the bringing into use of frequency assignments to non-GSO satellite systems;

*b)* that any new regulatory mechanism for management of frequency assignments to non-GSO systems in the Master Register should not impose an unnecessary burden;

*c)* that since No. **13.6** is applicable to non-GSO systems with frequency assignments that were confirmed to have been brought into use prior to 1 January 2021 in the frequency bands and services to which this Resolution applies, transitional measures are required to provide affected notifying administrations the opportunity to either confirm deployment of satellites in accordance with the notified required characteristics as specified in Appendix **4**, or to complete deployment in accordance with this Resolution;

*d)* that for frequency assignments to non-GSO system brought into use and having reach the end of the period referred to in No. **11.44** prior to 1 January 2021 in the frequency bands and services to which this Resolution applies, affected notifying administrations should be given the opportunity to either confirm the completion of the deployment of satellites in accordance with the Appendix **4** characteristicsof their recorded frequency assignments, or be given sufficient time to complete deployment in accordance with this Resolution;

*e)* that it is not necessary or appropriate for the Bureau, in the interest of improving the efficient use of the orbital/spectrum resource or otherwise, to routinely use the procedures of No. **13.6** to seek confirmation of the deployment of the number of satellites in notified orbital planes for non-geostationary-satellite orbit systems in frequency bands and services not listed in *resolves*1of this Resolution;

*f)* that No. **11.49** addresses the suspension of recorded frequency assignments to a space station of a satellite network or to space stations of a non-geostationary satellite system,

recognizing further

that this Resolution relates to those aspects of non-GSO systems to which *resolves*1 applies with regard to the notified required characteristics as specified in Appendix **4**. The conformity of the notified required characteristics of the non-GSO systems other than those referred to in *recognizing d)* above is outside the scope of this Resolution,

noting

that for the purpose of this Resolution:

– the term “frequency assignments” is understood to refer to frequency assignments to a space station of a non-geostationary satellite system;

– the term “notified orbital plane” means an orbital plane of the non-GSO system, as provided to the Bureau in the most recent advance publication, coordination or notification information for the system’s frequency assignments, that possesses the general characteristics of Items A.4.b.4.a through A.4.b.4.f, and Item A.4.b.5.c (only for orbits whose altitudes of the apogee and perigee are different) in Table A of Annex 2 to Appendix **4**;

− the term “total number of satellites” is understood to mean the sum of the various values of Appendix **4** data item A.4.b.4.b associated with the notified orbital planes,

resolves

1 that this Resolution applies to frequency assignments to non-geostationary satellite systems brought into use in accordance with Nos. **11.44** and [MOD] **11.44C**,in the frequency bands and for the services listed in the Table below:

Frequency bands and services for application of the milestone-based approach

| Bands (GHz) | Space radiocommunication services |
| --- | --- |
| Region 1 | Region 2 | Region 3 |
| 10.70-11.70 | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) | FIXED-SATELLITE (space-to-Earth) |
| 11.70-12.50 | FIXED-SATELLITE (space-to-Earth) |
| 12.50-12.70 | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) | FIXED-SATELLITE (space-to-Earth) | BROADCASTING-SATELLITEFIXED-SATELLITE (space-to-Earth) |
| 12.7-12.75 | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) | FIXED-SATELLITE (Earth-to-space) | BROADCASTING-SATELLITEFIXED-SATELLITE (space-to-Earth) |
| 12.75-13.25 | FIXED-SATELLITE (Earth-to-space) |
| 13.75-14.50 | FIXED-SATELLITE (Earth-to-space) |
| 17.30-17.70 | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) | None | FIXED-SATELLITE (Earth-to-space) |
| 17.70-17.80 | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) | FIXED-SATELLITE (space-to-Earth) | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) |
| 17.80-18.10 | FIXED-SATELLITE (space-to-Earth)FIXED-SATELLITE (Earth-to-space) |
| 18.10-19.30 | FIXED-SATELLITE (space-to-Earth) |
| 19.30-19.60 | FIXED-SATELLITE (space-to-Earth) (Earth-to-space) |
| 19.60-19.70 | FIXED-SATELLITE (space-to-Earth) (Earth-to-space) |
| 19.70-20.10 | FIXED-SATELLITE (space-to-Earth) | FIXED-SATELLITE (space-to-Earth)MOBILE-SATELLITE (space-to-Earth) | FIXED-SATELLITE (space-to-Earth) |
| 20.10-20.20 | FIXED-SATELLITE (space-to-Earth)MOBILE-SATELLITE (space-to-Earth) |
| 27.00-27.50 |  | FIXED-SATELLITE (Earth-to-space)INTER-SATELLITE |
| 27.50-29.50 | FIXED-SATELLITE (Earth-to-space) |
| 29.50-29.90 | FIXED-SATELLITE (Earth-to-space) | FIXED-SATELLITE (Earth-to-space)MOBILE-SATELLITE (Earth-to-space) | FIXED-SATELLITE (Earth-to-space) |
| 29.90-30.00 | FIXED-SATELLITE (Earth-to-space)MOBILE-SATELLITE (Earth-to-space) |
| 37.50-38.00 | FIXED-SATELLITE (space-to-Earth) |
| 38.00-39.50 | FIXED-SATELLITE (space-to-Earth) |
| 39.50-40.50 | FIXED-SATELLITE (space-to-Earth)MOBILE-SATELLITE (space-to-Earth) |
| 40.50-41.25 | FIXED-SATELLITE (space-to-Earth)BROADCASTING-SATELLITE |
| 47.20-50.20 | FIXED-SATELLITE (Earth-to-space) |
| 50.40-51.40 | FIXED-SATELLITE (Earth-to-space) |

2 that for the frequency assignments to which *resolves* 1 applies, and for which the end of the seven-year regulatory period is 1 January 2021 or later, the notifying administration shall communicate to the Bureau the required deployment information in accordance with Annex 1 to this Resolution no later than 30 days after the end of the regulatory period specified in No. MOD **11.44** or 30 days after the end of the bringing into use period referred to in No. MOD **11.44C**, whichever comes later;

3 that for frequency assignments to which *resolves* 1 applies, and for which the end of the seven-year regulatory period specified in No. MOD **11.44** has expired prior to 1 January 2021, the notifying administration shall communicate to the Bureau the required deployment information in accordance with Annex 1 to this Resolution no later than 30 days after the 1 January 2021;

4 that upon receipt of the required deployment information submitted in accordance with *resolves* 2or3 above, the Bureau shall:

• promptly make this information available “as received” on the ITU website;

• add a remark to the Master Register entry if available or to latest notification information, as appropriate, stating that the assignments are subject to the application of this Resolution if the number of satellites communicated to the Bureau under *resolves*2 or3aboveis less than 100% of the total number of satellites (rounded down to the lower integer) indicated in the latest notification information published in the BR IFIC (Part I‑S) for the frequency assignments; and

• publish the results of action taken pursuant to *resolves* 4*b)* above in the BR IFIC and the ITU website;

5 that, if the number of satellites (rounded down to the lower integer) communicated to the Bureau under *resolves* 2 or 3 above is 100% of the total number of satellites indicated in the latest notification information published in the BR IFIC (Part I‑S) for the frequency assignments, *resolves* 6 to 14 of this Resolution are not applicable;

6 that, for the frequency assignments to which *resolves* 2 applies, the notifying administration shall communicate to the Bureau the required deployment information in accordance with Annex 1 to this Resolution for the milestone period mentioned in subsections *a)* through *c)* of this *resolves* 6:

*a)* no later than 30 days after the expiry of the 2-year period after the end of the seven-year period referred to in No. **11.44**;

*b)* no later than 30 days after the expiry of the 4-year period after the end of the seven-year period referred to in No. **11.44**;

*c)* no later than 30 days after the expiry of the 7-year period after the end of the seven-year period referred to in No. **11.44**;

7 that, for the frequency assignments to which *resolves* 3 applies, the notifying administration shall communicate to the Bureau the required deployment information in accordance with Annex 1 to this Resolution for the milestone period mentioned in subsections *a)* through *c)* of this *resolves* 7:

*a)* no later than 31/01/2023 (corresponding to 30 days after the expiry of the 2-year period after the 1 January 2021);

*b)* no later than 31/01/2025 (corresponding to 30 days after the expiry of the 4-year period after the 1 January 2021);

*c)* no later than 31/01/2028 (corresponding to 30 days after the expiry of the 7-year period after the 1 January 2021);

8 that, upon receipt of the required deployment information submitted in accordance with *resolves* 6 or 7, the Bureau shall:

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

*b)* conduct an examination of the information provided for compliance with the minimum number of satellites to be deployed as prescribed for each period in *resolves* 9*a)*, 9*b)* or 9*c)* as appropriate;

*c)* modify the Master Register entry if available or latest notification information, as appropriate, for the frequency assignments to the system to remove the remark stating that the assignments are subject to the application of this Resolution if the number communicated to the Bureau under *resolves* 6, or *resolves* 7, is “100%” (rounded down to the lower integer) or above of the total number of satellites indicated in the Master Register entry for the non-geostationary satellite system;

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

9that, the notifying administration shall also submit to the Bureau, no later than 90 days after the expiry of the milestone period referred to in *resolves* 6*a),* 6*b),*6*c)* or *resolves* 7*a),* 7*b),*7*c),* as appropriate, the modifications to the characteristics of the notified or recorded frequency assignments if the number of space stations declared as deployed,

*a)* under *resolves* 6*a)* or7*a)*, as appropriate,is less than 10% of the total number of satellites (rounded down to the lower integer) indicated in the latest notification information published in the BR IFIC (Part I‑S) for the frequency assignments. In this case, the modified total number of satellites shall not be greater than 10 times the number of space stations declared as deployed under *resolves* 6*a)* or7*a)*;

*b)* under *resolves* 6*b)* or7*b)*, as appropriate, is less than 33% of the total number of satellites (rounded down to the lower integer) indicated in the latest notification information published in Part I‑S of the BR IFIC for the frequency assignments. In this case, the modified total number of satellites shall not be greater than 3 times the number of space stations declared as deployed under *resolves* 6*b)* or7*b)*;

*c)* under *resolves* 6*c)* or7*c)*, as appropriate,is less than 100% of the total number of satellites (rounded down to the lower integer) indicated in the latest notification information published in Part I‑S of the BR IFIC for the frequency assignments. In this case, the modified total number of satellites shall be equal to the number of space stations declared as deployed under *resolves* 6*c)* or7*c)*;

9*bis* that the Bureau shall, no later than forty-five (45) days before any deadline for submission by a notifying administration under *resolves*2, *resolves*3, subsections *a)*, *b)* or *c)* of *resolves*6 and subsections *a)*, *b)* or *c)* of *resolves* 7, send a reminder to the notifying administration to provide the information required;

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

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

*b)* the Bureau shall conduct an examination for compliance with the maximum number of satellites as per *resolves* 9*a)*, 9*b)* or 9*c)* and Nos. **11.43A**/**11.43B**, as appropriate;

i) should the Bureau reach a favourable finding under No.**11.31**; and

ii) should the modifications be limited to the reduction of the number of orbital planes (Appendix **4** data item A.4.b.1) and the modifications to the RAAN (Appendix **4** data item A.4.b.4.g) the longitude of the ascending node (Appendix **4** data item XX) and the date and time of epoch (Appendix **4** data items XX and YY) associated with the remaining orbital planes or the reduction of the number of space stations per plane (Appendix **4** data item A.4.b.4.b) and the modifications of the initial phase of the space stations (Appendix **4** data item A.4.b.4.h) within planes; and

iii) should the notifying administration provide a commitment stating that the characteristics as modified will not cause more interference or require more protection than the characteristics provided in the latest modification information published in PART I‑S of the BR IFIC for the frequency assignments (see Appendix **4** data item A.20)

*c)* the Bureau, for the purpose of No. **11.43B**, shall not treat these modifications as new notifications of frequency assignments and shall retain the original dates of entry of the frequency assignments in the Master Register;

*d)* the Bureau shall ensure the remark stating that the assignments are subject to the application of this Resolutionas defined in *resolves* 6 or 7 is retained until the milestone process of this Resolution is complete

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

*Note: An example of the implementation of resolves 10c)iii) of this option for modification information is presented in section 3/7/1.5.2.3.2 below.*

11 that, if a notifying administration fails to communicate the information required under *resolves* 2 or *resolves*3, *resolves* 6*a),* 6*b)* or 6*c)* or *resolves* 7*a)*, 7*b)* or 7*c)*, as appropriate, the Bureau shall promptly send to the notifying administration a reminder asking the administration to provide the required information within thirty (30) days from the date of reminder from the Bureau;

11*bis* that, if a notifying administration fails to provide information after the reminder sent under *resolves* 11, the Bureau shall send to the notifying administration a second reminder asking it to provide the required information within fifteen (15) days from the date of the second reminder;

11*ter* that, if a notifying administration fails to provide the required information under *resolves*11 and 11*bis*, the Bureau shall treat the case as it would treat a non-response case under No. **13.6**, and continue to take the entry into account when conducting its examinations until the decision is made by the Board to cancel the entry or modify the entry by suppressing the notified orbital parameters of all satellites not listed in the last complete deployment information submitted under *resolves* 6 or 7, as appropriate;

*Section of the Resolution on the suspensions of a Recorded frequency assignments*

Alternative 1

13 that, for frequency assignments suspended under No. **11.49**, the date of bringing back into use of frequency assignments shall be no later than the date set as per No. **11.49** or the date of the first next milestone as per *resolves* 6*a)*, 6*b)* or 6*c)* or *resolves* 7*a)*, 7*b)* or 7*c)* as appropriate, whichever date comes first;

14 that the suspension of frequency assignments in accordance with No. **11.49** does not extend the milestone period as specified in *resolves* 6*a)*, 6*b)* or 6*c)* or *resolves* 7*a)*, 7*b)* or 7*c)*, as applicable, nor reduce the requirements associated with any of the remaining milestones as derived from *resolves* 6*a)*, 6*b)* or 6*c)* or *resolves* 7*a)*, 7*b)* or 7*c)*, as appropriate;

Alternative 2

13 that the suspension of the use of frequency assignments under No. **11.49** at any point prior to the end of the applicable milestone periods specified in *resolves* 6*a)*, 6*b)* or 6*c)* or *resolves* 7*a)*, 7*b)* or 7*c)* of this Resolution shall not alter or reduce the requirements associated with any of the remaining milestones as derived from *resolves* 6*a)*, 6*b)* or 6*c)* or *resolves* 7*a)*, 7*b)* or 7*c)* of this Resolution, as applicable;

*End of the Section of the Resolution on the suspension of a recorded frequency assignments*

15 that every two years after the date specified in *resolves* 2 or 3 subject to validation of *resolves* 5 or *resolves* 6*c)* or *resolves*7*c)*, as appropriate, the notifying administration shall communicate to the Bureau, within thirty days after the end of each two-year period, the complete deployment information in accordance with Annex 1 to this Resolution;

16 that, if a notifying administration fails to implement *resolves* 15, the Bureau shall send to the notifying administration a reminder asking it to provide the required information within thirty days;

17 that, if the notifying administration does not apply No. **11.49** for the non-geostationary-satellite system and if the total number of satellites provided under *resolves* 15 and 16, as appropriate, is for the second consecutive time lower than “100%” of the total number of satellites (rounded down to the lower integer) indicated in the Master Register, *resolves* 18 to 21 apply;

18 that, in application of *resolves*17, the Bureau shall request the notifying administration to provide, within thirty days, the updated notified orbital parameters in order to adjust them to the total number of satellites provided under *resolves* 15 or 16;

19 that, 15 days before the expiry of the date referred in *resolves* 18, the Bureau shall send a reminder of the deadline to the administration;

20 that, if the notifying administration does not provide information requested under *resolves* 18, the frequency assignments shall be cancelled by the Bureau;

21 that, upon receipt of the modifications to the characteristics of the notified or recorded frequency assignments as referred to in *resolves*18, the Bureau shall,

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

*b)* conduct an examination for compliance with the maximum number of satellites as per *resolves* 17, and either

i)conduct an examination under No.**11.31** when these modifications are limited to the reduction of the number of orbital planes (Appendix **4** data item A.4.b.1) and the modifications to the RAAN (Appendix **4** data item A.4.b.4.g) the longitude of the ascending node (Appendix **4** data item XX) and the date and time of epoch (Appendix **4** data items XX and YY) associated with the remaining orbital planes or the reduction of the number of space stations per plane (Appendix **4** data item A.4.b.4.b) and the modifications of the initial phase of the space stations (Appendix **4** data item A.4.b.4.h) within planes and, if favourable, not treat these modifications as new notifications of assignments and shall retain their original dates; or

ii) apply Nos. **11.43A** and **11.43B** when these modifications covered other Appendix **4** data items than those referred to in *i) above;* and

*c)* publish the information provided and its findings in the BR IFIC,

*instructs the Radiocommunication Bureau*

1 to take the necessary actions to implement this Resolution and report to subsequent WRCs on the results of the implementation of this Resolution.

Annex 1 to draft new
Resolution [CHN/A7(A)-NGSO-MILESTONES] (WRC-19)

Information to be submitted about the deployed space stations

A Identity of the satellite system

*a)* Name of the satellite system

*b)* Name of the notifying administration

*c)* Country symbol

*d)* Reference to the advance publication information or to the request for coordination, as applicable

*e)* Reference to the notification.

B Spacecraft manufacturer

In cases where a contract for satellite procurement covers more than one satellite, the relevant information shall be submitted for each satellite:

*a)* Name of the spacecraft manufacturer

*b)* Number of satellites procured.

C Launch services provider

In cases where a contract for launch procurement covers more than one satellite, the relevant information shall be submitted for each satellite:

*a)* Name of the launch vehicle provider

*b)* Name of the launch vehicle

*c)* Name and location of the launch facility

*d)* Launch date.

D Space station characteristics

For each spacecraft:

*a)* Name of the spacecraft

*b)* Orbital characteristics of the spacecraft (see **11.44C.4**)

*c)* Frequency assignments that the space station can transmit or receive.

**Reasons:** To reflect views of China into the draft Resolution.

## 2) Issue F: Measures to facilitate entering new assignments into the RR Appendix 30B List

Issue F proposes to revise and restructure the coordination triggers used in RR Appendix **30B,**  taking 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. The CPM Report contains four Methods to satisfy the issue. Method F1 proposes the modifications to Annex 3 and 4 of Appendix **30B** by introducing a reduced coordination arc and mechanisms. Method F2 could be the same as Method F1 except that to allow new submissions of administrations to benefit from already agreed single entry C/I values, the provisions as contained in the current RR Appendix **30B** to this effect would be retained. Method F3 would be based on either Methods F1 or F2, but in addition, protection of the existing and operational additional systems recorded in the List prior to a specified date will be provided by applying criteria specified in Annex 4 (Rev.WRC-07) of RR Appendix **30B** to the Radio Regulations. Method F4 proposes no change to the RR.

**Views on Issue F**: In order to help to alleviate the difficulties faced by administrations in attempting to enter assignments into the RR Appendix **30B** List and to facilitate coordination of networks while protecting the RR Appendix **30B** Plan and List, China supports Method F2 as outlined in the CPM Report.

## 3) Issue J: Modifications of Section 1, Annex 1 of RR AP30, PFD Limit

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

• 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 territories of neighbouring countries. With these improvements, the 4th meeting of WP 4A agreed for the proposal to become a new issue under AI 7.

The CPM Report contains two Methods to satisfy the issue. Method J1 is based on the proponent’s initiative which meant to modify § 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.

**Views on Issue J**: China does not support modification of a hard pfd limit (−103.6 dB(W/(m2· 27 MHz) included in Annex **1** to RR Appendix **30** and is in favour of Method J2.

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