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Geneva, 23 March - 2 April 2015

INTERNATIONAL TELECOMMUNICATION UNION

PLENARY MEETING

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Working Group 5

PROPOSED MODIFICATIONS TO THE DRAFT CPM REPORT

CHAPTER 5, AGENDA ITEM 7

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;*

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

5/7/8 Issue H – Using one space station to bring frequency assignments at different orbital locations into use within a short period of time

5/7/8.1 Executive summary for Issue H

It was noted in the minutes of WRC-12 that using one space station to bring into use (BIU) frequency assignments at different orbital locations within a short period of time was not the intent of the revised provisions adopted by WRC-12. It was also noted that ways to address this issue require study. Various methods were suggested to deal with this issue as described in the following sections.

5/7/8.2 Background

No. **11.44B** and No. **11.49** of the Radio Regulations were revised at WRC-12 in order to clarify issues regarding the bringing into use, or resumption of use after a suspension, of frequency assignments associated with satellite networks.

While adopting these revised provisions WRC-12 recognized that the issue of using one space station to bring frequency assignments at different orbital locations into use within a short period of time was not the intent of these revised provisions. However, it was also recognized that there are legitimate reasons why an administration or operator may need to move a spacecraft from one

orbital position to a new orbital position[1], and care should be taken not to constrain the legitimate use of satellite manoeuvres and management. The ITU-R was requested to study this issue. In its plenary meeting, WRC-12 also requested the BR, until ITU-R studies are completed, to make an enquiry to administrations as to the last previous orbital location/frequency assignments brought into use with that satellite and make such information available, where an administration brings into use frequency assignments at a given orbital location using an already in-orbit satellite.

5/7/8.3 Summary of technical and operational studies, including a list of relevant ITU-R Recommendations

5/7/8.3.1 The study requested from the plenary of WRC-12

As explained in Background section above, according to the plenary minutes of WRC-12, the ITU-R was requested to study the issue of using one space station to bring frequency assignments at different orbital locations into use within a short period of time.

In examining orbital information of geo-stationary satellites such as NORAD data cases can be found where an on-orbit satellite moved to one orbital position and stayed 90 + α days (where α is a relatively small number) and then moved to another orbital position, and the associated administration used that satellite to inform the Bureau of the bringing into use of the corresponding frequency assignments. However, what is not clear from this data is the reason for such satellite manoeuvres. The following section examines various cases of moving satellites from one location to another and attempts to qualify those cases in the terms defined by WRC-12.

Studies conducted under this issue should take into account the following points:

a) the assignments pertaining to the space station moved from its initial orbital position to a new orbital position to support the bringing into use of the latter assignments would be suspended where the suspension period exceeds six months and,

b) the suspended assignments once back into use would not be authorized to be suspended for a second time in a way that the corresponding satellite moves to a third orbital position within a relatively short period of time and supports operation of another satellite network due to the fact that this results in the “hopping” of the satellites as mentioned.

It is worth indicating that currently in the RR there is no mention of neither the maximum number of suspension nor the cumulative time of suspension. It is therefore necessary to examine this issue in order to ensure that the objectives and purposes of RR No. **11.49** are achieved.

5/7/8.4 Analysis of the results of studies

5/7/8.4.1 Study 1

WRC-12 noted that “there are legitimate reasons why an administration or operator may need to move a spacecraft from one orbital position to a new orbital position, and care should be taken not to constrain the legitimate use of fleet manoeuvres and management.” As it is difficult to define generally “legitimate use”, examples of various cases were considered for using one space station to bring frequency assignments at different orbital locations into use within a short period of time. These cases require careful examination in order to ensure that the objectives of RR No. **11.49** are respected.

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[1] Such legitimate movement shall in no way contradict or conflict with relevant provisions of the RR.

Some example cases where one satellite brings into use frequency assignments at multiple locations are as follows.

Case 1: In-orbit Satellite 1 that BIU'ed frequency assignments at location A is moved to location B upon launch of a second Satellite 2 to location A. Satellite 1 then BIU's frequency assignments at location B.

- There should not be any concerns with this scenario in general. If Satellite 2 uses the frequency assignments in the same manner as Satellite 1 at location A, then there is no reason to suspend the assignments at location A. If Satellite 1 is subsequently moved to another location C and BIUs new frequency assignments at that location without the launch of a third satellite to location B, then the possibility of misuse may begin to arise.
- If Satellite 1 was a newly launched satellite and was moved to location B at 90+α days after initiation of the BIU at location A, and after launch of Satellite 2 to location A, this would represent a case of a single satellite bringing into use frequency assignments at multiple orbital locations within a short period of time, but would not appear to differ significantly from the general case discussed above. As in the general case, concerns of misuse may begin to arise if Satellite 1 is subsequently moved to another location, location C, and BIUs frequency assignments at that location, and the location B assignments are suspended.

Case 2: In-orbit Satellite 1 that BIU'ed frequency assignments at location A is moved to location B upon launch failure of Satellite 2 to location B. The frequency assignments at location A are suspended. A replacement for Satellite 2 is built and 2.5 years later is launched to location B, at which time Satellite 1 returns to location A and resumes use of the previously BIU'ed frequency assignments.

- There should not be any concerns with this scenario as it illustrates the very purpose that RR No. **11.49** was implemented. The suspension of an assignment at an orbital location because of satellite failure, or the movement of a satellite to another orbital location to recover from launch failure and the subsequent return to the initial location are valid reasons for using RR No. **11.49**.
- If Satellite 1 were a "newly launched" satellite that had only been at location A for 90+α days and were moved to location B to recover from a launch failure as above, this would represent a case of a single satellite bringing into use frequency assignments at multiple orbital locations within a short period of time. However, this would not appear to differ significantly from the general case discussed immediately above. In this scenario, it should not matter whether Satellite 1 was newly launched or not. The suspension of use of the frequency assignments at location A can be seen as normal orbital manoeuvres, however, if Satellite 1 is moved again to a new location C after the BIU of frequency assignments at location B, then concerns of misuse may begin to arise.

Case 3: Satellite 1 is launched to orbital location A, where it BIU's frequency assignments at that location. Satellite 1 then moves to location B and BIU's frequency assignments at that location. Satellite 2 is launched to location A at some time later and begins operating using the already BIU'ed frequency assignments.

- If Satellite 1 was a newly launched satellite that had been at location A for 90+α days and Satellite 2 is launched to location A very soon after Satellite 1 leaves (say one month), this would seem to be a case of normal fleet management, even though Satellite 1 would have BIU'ed frequency assignments at multiple

locations within a short period of time. What if Satellite 2 is launched five months after Satellite 1 leaves, or twenty months after Satellite 1 leaves? Does this change the situation? Moving a satellite to another location and replacing that satellite with another would generally be considered normal fleet manoeuvres. The only timeline that would appear to matter in this case is the 3-year suspension period in RR No. **11.49**.

Case 4: Satellite 1 is launched to orbital location A, where it BIU's frequency assignments at that location. Satellite 1 then moves to location B and BIU's frequency assignments at that location. Satellite 1 then returns to location A and resumes operations there. Sometime later Satellite 2 is launched to location B and begins operating using the already BIU'ed frequency assignments.

- If Satellite 1 is away from location A less than six months, there is no requirement to inform the BR or suspend the assignments. If Satellite 1 is away longer than six months then the assignments at location A must be suspended and use resumed once Satellite 1 returns. A possibility of misuse could arise if this is repeated to bring into use frequency assignments at multiple orbital locations.
- If Satellite 1 were operating initially at location A for 90+α days this would represent a case of a single satellite bringing into use frequency assignments at multiple orbital locations within a short period of time.

What the examples above illustrate is that there can be many variations for cases where a single satellite brings into use frequency assignments at multiple orbital locations within a short period of time. Some variations may be clearly considered by all to be straightforward and acceptable, whereas in other cases things may not be so clear, or there may be factors associated with the timing of events that changes a case from being clearly acceptable to not so clear. What does seem to emerge from consideration of the cases above is that the possibility for misuse of the BIU and suspension provisions only seems to arise for cases of an in-orbit satellite bringing into use frequency assignments at multiple orbital locations within a short period of time, while at the same time leaving one or more of the previously occupied orbital locations vacant for some period of time. However, even then, there do appear to be cases where such actions could be justified. As such, it is considered not possible to construct specific regulatory provisions to address the case of a single satellite bringing into use frequency assignments at multiple orbital locations within a short period of time.

In addition to the above, it was recognized that there is already a mechanism in place for the BR to query an administration under RR No. **13.6** or under the minutes from the closing plenary of WRC-12 in those cases where it appears that an already in-orbit satellite has been used to bring into use frequency assignments at multiple orbital locations within a short period of time.

5/7/8.4.2 Study 2

When applying the provisions RR Nos. **11.44B** and **11.49**, there may be the case that a single satellite is used to protect assignments at multiple orbital locations simultaneously, which may lead to confusing administrations. Figures 5/7/8.4.2-1 and 5/7/8.4.2-2 show possible examples for this possibility using a single satellite and two satellites, respectively.

FIGURE 5/7/8.4.2-1

Example 1 of misuses of the provisions of RR Nos. 11.44B and 11.49 using a single satellite

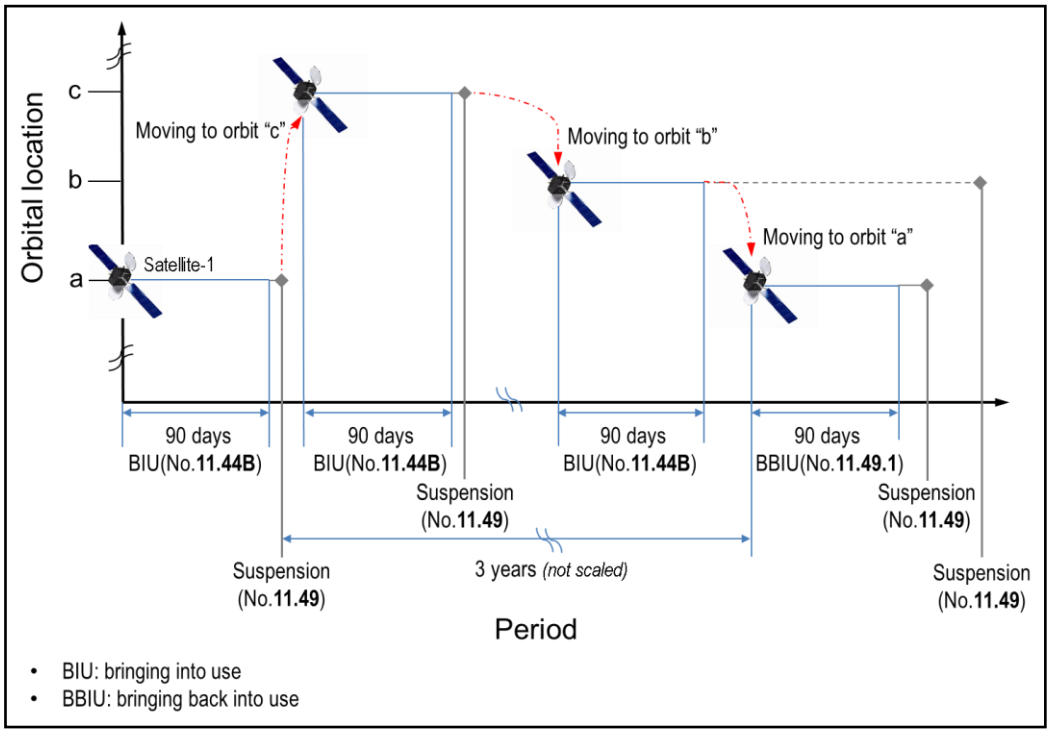
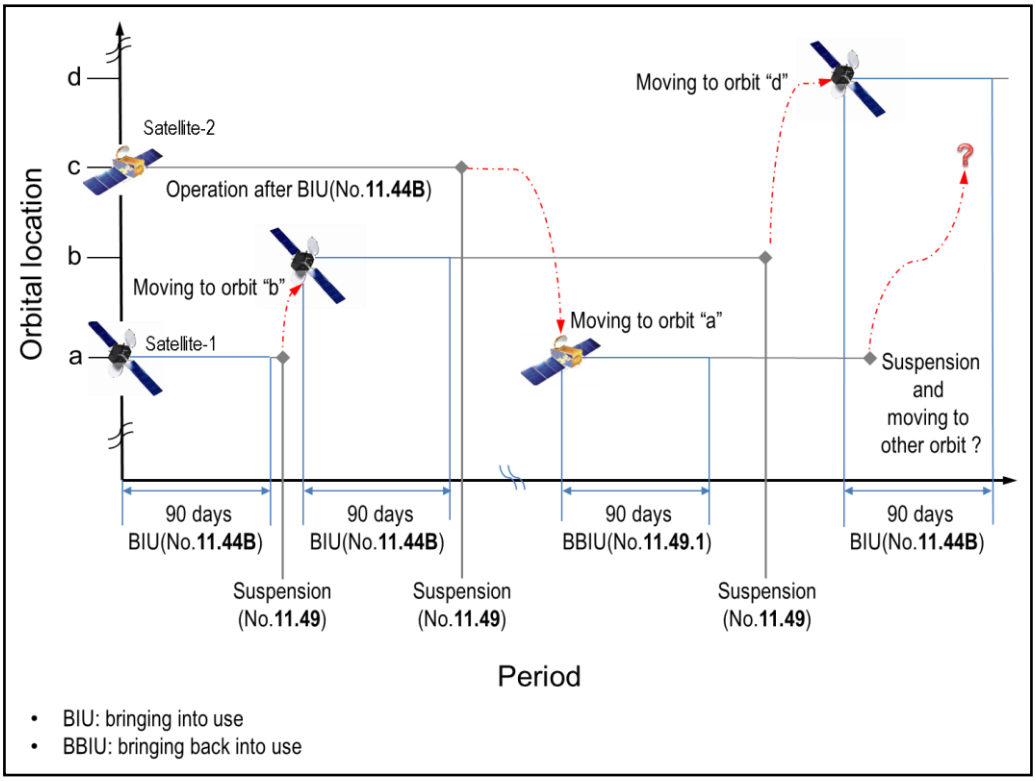


FIGURE 5/7/8.4.2-2

Example 2 of misuses of the provisions of RR Nos. 11.44B and 11.49 using two satellites



In the view of some administrations Example 2 above could represent a case of legitimate frequency management by an operator.

It should be recognized that No. 196 of the Constitution specifies that "*In using frequency bands for radio services, Members shall bear in mind that radio frequencies and the geostationary-satellite orbit are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of these Regulations, so that countries or groups of countries may have equitable access to both, taking into account the special needs of the developing countries and the geographical situation of particular countries*".

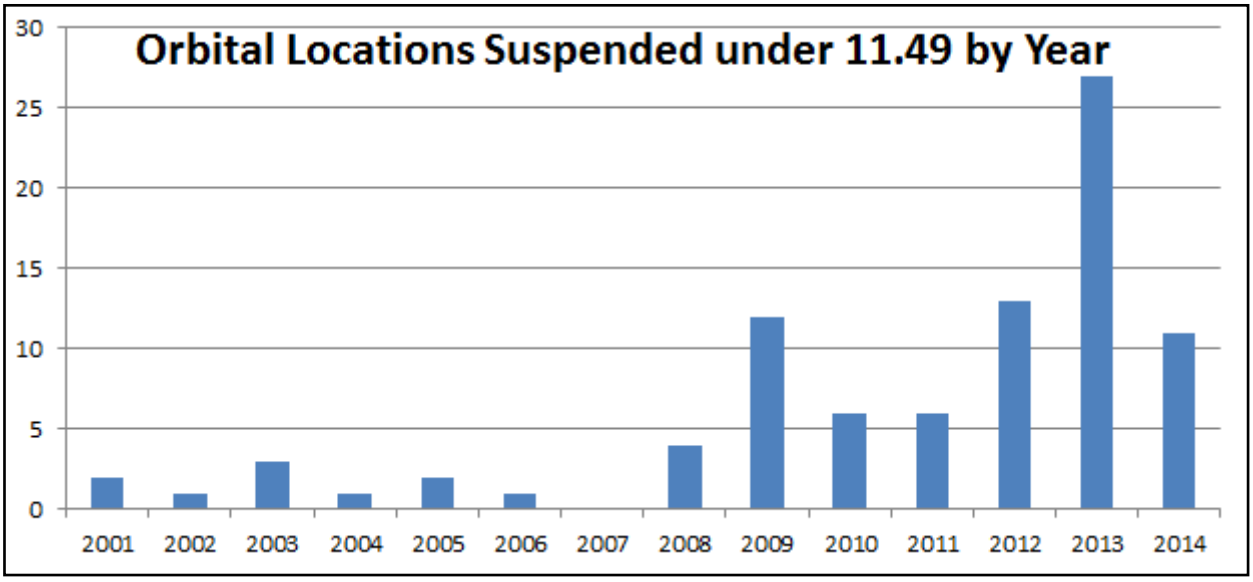
Therefore, taking into account the above, the misuses of the provisions of RR Nos. **11.44B** and **11.49** should be avoided.

5/7/8.4.3 Study 3 – Concerns regarding satellite "hopping"

Evidence of a significant increase in orbital locations suspended under RR No. **11.49** since the beginning of 2013, when the new bringing into use and suspension provisions of the 2012 Radio Regulations came into effect, can be seen in Figure 5/7/8.4.3-1 below. Many of the suspensions are likely to be due to an increased focus on maintaining an accurate master register (for example Circular Letter CR/301 of 2009) and the changes to the RR No. **11.49** that took effect in 2013, but the rise in suspensions may also indicate that some spacecraft are being used to bring into use satellite networks at multiple locations.

FIGURE 5/7/8.4.3-1

Orbital locations suspended under RR No. 11.49 by year



Analysis of the data in the "Bringing into Use" and "Suspensions" sections of the SNL publications identifies ten cases of a network brought into use after 1 November 2012 being suspended after a period of ninety-one hundred days from the date of bringing into use. All these networks remain suspended as of 4 November 2014. It appears many of these suspensions are resulting from the associated space station being moved to another orbital location for the purpose of bringing into use another network.

5/7/8.5 Method(s) to satisfy Issue H

5/7/8.5.1 Method H1

This method is to continue the current practice which is to make an enquiry to an administration that brings into use frequency assignments at a given orbital location using an already in-orbit satellite and makes such information available.

Under this method, an administration would include, as part of the declaration of bringing into use of frequency assignments, the following information for those cases where an already in-orbit satellite is used to bring into use frequency assignments at a given orbital location and that same satellite was used to bring into use frequency assignments at another orbital location within a short period of time, and the previous orbital location has been left vacant:

a) On which orbital position did the in-orbit satellite stay previously?

b) Which satellite network was brought into use at the previous orbital location using the in-orbit satellite?

c) The reason for its relocation.

On receipt of the information sent under the procedure above, the Bureau shall make available this information as soon as possible and shall publish it in the BR IFIC and/or post it on the webpage as appropriate.

It is expected that the publication through the BR IFIC and/or the webpage will contribute to minimizing the cases of BIU which are not associated with "legitimate use" and will lead to the efficient use of spectrum/orbit resources.

From a regulatory point of view, there are two options for this method as follows:

Option A: to record the procedure above or to endorse the minutes of WRC-12 in the minutes of the Plenary of WRC-15;

Option B: to adopt a new WRC Resolution to resolve that the BR shall perform the above procedure and to invite the ITU-R to address this issue.

5/7/8.5.2 Method H2

Under this method there would be No Change to the Radio Regulations. WRC-12 has already recognized that the issue of using one space station to bring frequency assignments at different orbital locations into use within a short period of time was not the intent of the new provisions of No. **11.44B** and No. **11.49** of the Radio Regulations.

In Circular Letter CR/333, the BR brought to the notice of administrations the WRC-12 decisions included in the Minutes of Plenary meeting relating to space services procedures. In examining the issue of using one space station to bring frequency assignments at different orbital locations into use within a short period of time, it must be emphasized that there are legitimate reasons why an administration or operator may need to move a spacecraft from one orbital position to a new orbital position, and care should be taken not to constrain the legitimate use of satellite manoeuvres and management. This could include relief of a failed satellite, or a satellite manoeuvre to ensure service and coverage requirements are met. These kinds of satellite manoeuvres and management should not be constrained.

It should be noted that this issue was recently addressed by WRC-12 and more time may be needed to determine the whole picture of the regulatory consequences of the new package of regulations.

It is also noted that there is an existing mechanism to address the difference between actual use and the recorded information in the Master Register. The Bureau may apply RR No. **13.6** if reliable information suggests otherwise than what is recorded.

In order to ensure that opportunities for abusive practices are minimized, where an administration brings into use frequency assignments at a given orbital location using an already in-orbit satellite, the practice of the BR making an enquiry of an administration as to the last orbital location/frequency assignments were brought into use and making such information available could be continued.

5/7/8.5.3 Method H3

WRC-12 introduced the additional provisions No. **11.44.2** and No. **11.44B** in the RR in order to better define the bringing into use of a frequency assignment to a space station in the geostationary-satellite orbit (GSO). According to RR No. **11.44B**, "A frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. …".

However, the current provisions regarding the bringing into use (BIU) , on the one hand do not properly address all possible scenarios of a satellite failure during the above mentioned period of ninety days, and on the other hand ,the use of a limited time of the 90 days as the only justification to provide regulatory support for the protection of the assignments pertaining to the space station in question due to the fact that after the expiry date of the above-mentioned 90 days, the space station may totally cease transmissions or may move to another location to protect another sets of assignments of other satellite networks.

This method proposes changes to the bringing into use provisions to extend the period from 90 days to 12 months and proposes the use of at least three space monitoring facilities in order to verify that a satellite has indeed been brought into use.

5/7/8.5.4 Method H4

This method proposes reducing the time available for suspension to the cumulative number of days that the satellite network has been in use, up to a limit of three years. Under this method once a satellite network has been in operation at an orbital position for a cumulative number of days greater than or equal to three years the existing provisions of RR No. **11.49** as of WRC-12 would effectively apply. This method would allow some short-term manoeuvres required for fleet management, but would limit the existing flexibility for legitimate fleet manoeuvres available under the current RR provisions in the first three (cumulative) years of operation at an orbital position. It is noted also that this method may also impact Administrations for which a satellite failure occurs in the first three (cumulative) years of operation. The issue of satellite failure may need to be addressed specifically if this method were to be implemented, however, satellite failure may also be dealt with on a case-by-case basis by a future WRC or by the Radio Regulations Board.

Concerns were expressed in relation to the reduction of the regulatory period of suspension of the use of frequency assignments referred to in RR No. **11.49** in the treatment of this issue, since the purpose of that term is to establish a period considered needed and reasonable for the administrations, in order to bring assignments back into use, through the development of the complex processes involved to build, launch, locate and bring into use a new satellite into the corresponding orbital position notified by an administration.

5/7/8.5.5 Method H5

Under the proposed new method, if an in-orbit satellite that was used to bring into use (BiU) frequency assignments of a satellite network at one orbital position is used to BiU frequency assignments of a satellite network at a different orbital position, the notifying administration would be required to include the following information as part of its confirmation of the BiU of frequency assignments to a satellite network:

A the previous orbital position of the in-orbit satellite used to BiU or bring back into use (BBiU) frequency assignments to a GSO satellite network;

B the date the satellite, used to BiU or BBiU frequency assignments to a GSO satellite network, left the previous orbital position, and

C the name of the ITU filing(s) used by the in-orbit satellite at the previous orbital position.

5/7/8.5.6 Method H6

This proposed new method relies on a new Resolution, referred to in RR No. **11.44B** and solely dedicated to the issue of "satellite hopping". The Resolution is based on the following principles:

– Need for administrations when declaring bringing into use, or resumption of use after suspension, to indicate whether this has been done with a newly-launched satellite or with an already in-orbit satellite (for the purpose of this Resolution, a newly-launched satellite would be understood as one that has never been used to bring into use, or resume the use of, frequency assignments).

– Explanation of abusive "satellite hopping" along the lines of: "Bringing into use (or resumption of use after suspension) together with an immediate suspension multiple times (e.g. 2 or 3) within a given period (e.g. any 1 year)" (Note: the numbers in round brackets are indicative and subject to further discussions with other administrations to achieve, as much as possible, a consensual explanation of what constitutes abusive "satellite hopping").

– If bringing into use (or resumption of use after suspension) of a satellite network is done with an already in-orbit satellite, the Bureau shall request the notifying administration to indicate on which orbital position the in-orbit satellite was previously located and which satellite network was brought into use at the previous orbital location using the in-orbit satellite.

– Based on the answers from the administration, the BR accepts the bringing into use (or resumption of use after suspension) or refers the case to the RRB if the answers show that abusive "satellite hopping" has been used.

– If the RRB concludes that the bringing into use (or resumption of use after suspension) was based on abusive "satellite hopping" as explained in the Resolution, the bringing into use (or resumption of use after suspension) is not accepted and the BR is tasked to implement the appropriate regulatory consequences.

5/7/8.6 Regulatory and procedural considerations for Issue H

5/7/8.6.1 Method H1

Option A: NOC to the RR.

Option B: NOC to the RR, excepting the addition of the new WRC Resolution as follows.

ADD

DRAFT NEW RESOLUTION [AI7-H1] (WRC-15)

Using one space station to bring frequency assignments at different orbital locations into use within a short period of time

The World Radiocommunication Conference (Geneva, 2015),

considering

a) that, under the current provisions, it is possible to bring frequency assignments into use at certain orbital slots, suspend them and also bring frequency assignments into use at different orbital locations by using one space station;

b) that the issue of using one space station to bring frequency assignments at different orbital locations into use within a short period of time was not the intent of the provisions;

c) that there are legitimate reasons why an administration or operator may need to move a spacecraft from one orbital position to a new orbital position, and care should be taken not to constrain the legitimate use of fleet manoeuvres and management;

d) that WRC-12 took significant steps in this regard with changes to bringing into use and suspension provisions,

noting

a) that WRC-12 added No. **11.44B** to stipulate that a frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days;

b) that WRC-12 revised No. **11.49** to stipulate that the date on which the recorded assignment is brought back into use shall be not later than three years from the date of suspension,

resolves

1 that administrations take necessary actions to minimize the use of a single space station to bring frequency assignments at different orbital locations into use within a short period of time;

2 to invite ITU-R to pursue studies on possible measures to prevent a single space station being used to bring into use frequency assignments within a short period of time at multiple orbital locations,

resolves further

1 to instruct the Radiocommunication Bureau to make an enquiry to the notifying administration as to the previous orbital location and satellite network(s) brought into use with that satellite and make such information available, where an administration brings into use frequency assignments at a given orbital location using an already in-orbit satellite, until the relevant studies are completed.

5/7/8.6.2 Method H2

NOC to the RR.

5/7/8.6.3 Method H3

ARTICLE 11

Notification and recording of frequency assignments[1, 2, 3, 4, 5, 6, 7, 7*bis*] (WRC-12)

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

MOD

11.44B A frequency assignment(s), including but not limited to TT&C operation, to a space station in the geostationary-satellite orbit shall be considered as having been brought into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ~~ninety days~~at least twelve months. The notifying administration shall so inform the Bureau within thirty days from the ~~end~~beginning of the ~~ninety-day~~twelve-month period. (WRC-~~12~~15)

ADD

11.44B*bis* The beginning and the end of the date of bringing into use of the frequency assignment(s) referred to in No. **11.44B**, shall be verified by the Bureau, in application of No. **13.6** of the Radio Regulations, together with the report obtained from at least three available space monitoring facilities in order that the validity of the information on the use of the assignment(s), in questions are ensured.

ADD

11.44B*ter* Should the results of the Bureau's investigation, taking into account of the report of continuous operation of the assignments by at least three space monitoring facilities, reveal that the above-mentioned regulatory timelines are not met, the subject assignments shall be cancelled and the administration concerned shall be informed after the Board considered the matter and confirmed the actions taken by the Bureau.

ADD

11.44B*quater* Should the notifying administration of the subject assignment(s) decide not to continue the regular operation of the assignment(s) after the end of the above-mentioned twelve-month period, as notified and recorded at initial orbital position, it would have to duly apply No. **11.49** of the Radio Regulations.

5/7/8.6.4 Method H4

ARTICLE 11

Notification and recording of frequency assignments[1, 2, 3, 4, 5, 6, 7, 7*bis*] (WRC-12)

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

MOD

11.49 Wherever the use of a recorded frequency assignment to a space station is suspended for a period exceeding six months, the notifying administration shall, as soon as possible, but no later than six months from the date on which the use was suspended, 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 No. **11.49.1** when applicable, so inform the Bureau, as soon as possible. ~~The date on which the recorded assignment is brought back into use[22] shall be not later than three years from the date of suspension.~~ The period from the date on which the use was suspended to the date the recorded assignment is brought back into use[22] shall not exceed the lesser of:

- the cumulative number of days for which the frequency assignments have been previously in use, or
- three years. (WRC-~~12~~15)

NOC

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[22] **11.49.1** The date of bringing back into use of a frequency assignment to a space station in the geostationary satellite orbit shall be the date of the commencement of the ninety-day period defined below. A frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought back into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. The notifying administration shall so inform the Bureau within thirty days from the end of the ninety-day period. (WRC-12)

5/7/8.6.5 Method H5

ARTICLE 11

Notification and recording of frequency assignments[1, 2, 3, 4, 5, 6, 7, 7*bis*] (WRC-12)

MOD

11.44B A frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. The notifying administration shall so inform the Bureau within thirty days from the end of the ninety-day period. Resolution **[SATHOP] (WRC-15)** shall apply. (WRC-1~~2~~5)

MOD

11.49 Wherever the use of a recorded frequency assignment to a space station is suspended for a period exceeding six months, the notifying administration shall, as soon as possible, but no later than six months from the date on which the use was suspended, 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 No. **11.49.1** when applicable, so inform the Bureau, as soon as possible. The date on which the recorded assignment is brought back into use[22] shall be not later than three years from the date of suspension. Resolution **[SATHOP] (WRC-15)** shall apply. (WRC-1~~2~~5)

APPENDIX 30 (REV.WRC-12)*

Provisions for all services and associated Plans and List[1] for the broadcasting-satellite service in the frequency bands 11.7-12.2 GHz (in Region 3), 11.7-12.5 GHz (in Region 1) and 12.2-12.7 GHz (in Region 2) (WRC-03)

(See Articles **9** and **11**) (WRC-03)

ARTICLE 5 (REV.WRC-12)

Notification, examination and recording in the Master International Frequency Register of frequency assignments to space stations in the broadcasting-satellite service[18] (WRC-07)

NOC

5.2.10 Wherever the use of a frequency assignment to a space station recorded in the Master Register and emanating from the Regions 1 and 3 List is suspended for a period exceeding six months, the notifying administration shall, as soon as possible, but no later than six months from the date on which the use was suspended, 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 so inform the Bureau, as soon as possible. The date on which the recorded assignment is brought back into use[20*bis*] shall be no later than three years from the date of suspension. (WRC-12)

MOD

20*bis* The date of bringing back into use of a frequency assignment to a space station in the geostationary-satellite orbit shall be the commencement of the ninety-day period defined below. A frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought back into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. The notifying administration shall inform the Bureau within thirty days from the end of the ninety-day period. Resolution **[SATHOP] (WRC-15)** shall apply. (WRC-12~~15~~)

APPENDIX 30A (REV.WRC-12)*

Provisions and associated Plans and List[1] for feeder links for the broadcasting-satellite service (11.7-12.5 GHz in Region 1, 12.2-12.7 GHz in Region 2 and 11.7-12.2 GHz in Region 3) in the frequency bands 14.5-14.8 GHz[2] and 17.3-18.1 GHz in Regions 1 and 3, and 17.3-17.8 GHz in Region 2 (WRC-03)

(See Articles **9** and **11**) (WRC-03)

ARTICLE 5 (REV.WRC-12)

Coordination, notification, examination and recording in the Master International Frequency Register of frequency assignments to feeder-link transmitting earth stations and receiving space stations in the fixed-satellite service[21,22] (WRC-07)

NOC

5.2.10 Wherever the use of a frequency assignment to a space station recorded in the Master Register and emanating from the Regions 1 and 3 List is suspended for a period exceeding six months, the notifying administration shall, as soon as possible, but no later than six months from the date on which the use was suspended, 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 so inform the Bureau, as soon as possible. The date on which the recorded assignment is brought back into use[24*bis*] shall be no later than three years from the date of suspension. (WRC-12)

MOD

24*bis* The date of bringing back into use of a frequency assignment to a space station in the geostationary-satellite orbit shall be the commencement of the ninety-day period defined below. A frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought back into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. The notifying administration shall inform the Bureau within thirty days from the end of the ninety-day period. Resolution **[SATHOP] (WRC-15)** shall apply. (WRC-1~~2~~5)

APPENDIX 30B (REV.WRC-12)

Provisions and associated Plan for the fixed-satellite service in the frequency bands 4 500-4 800 MHz, 6 725-7 025 MHz, 10.70-10.95 GHz, 11.2-11.45 GHz and 12.75-13.25 GHz

ARTICLE 8 (REV.WRC-12)

Procedure for notification and recording in the Master Register of assignments in the planned bands for the fixed-satellite service[11, 12] (WRC-07)

MOD

Following the alignment of § 8.17 on No. **11.49** as suggested under WRC-15 agenda item 7 Issue F, it is proposed to add at the end of this provision "Resolution **[SATHOP] (WRC-15)** shall apply".

ADD

DRAFT NEW RESOLUTION [SATHOP] (WRC-15)

Bringing into use or bringing back into use a satellite network using an already in-orbit satellite

The World Radiocommunication Conference (Geneva, 2015),

considering

a) that rational and efficient use must be made of the frequency spectrum and the geostationary-satellite orbit and that account should be taken of the provisions of Resolution **2 (Rev.WRC-03)** relating to the use by all countries, with equal rights and equitable access to the frequency bands and the associated satellite orbits for space radiocommunication services;

b) that Article 44 of the ITU Constitution stipulates that: "*In using frequency bands for radio services, Member States shall bear in mind that radio frequencies and any associated orbits, including the geostationary-satellite orbit, are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations,*

so that countries or groups of countries may have equitable access to those orbits and frequencies, taking into account the special needs of the developing countries and the geographical situation of particular countries";…

…

Note: Additional considerings could be added during WRC-15.

recognizing

a) that administrations may bring into use a frequency assignment to a space station in the geostationary-satellite orbit using an in-orbit satellite from another administration;

b) that the absence of a GSO space station capable of transmitting and receiving the frequency assignments at a notified orbital position can lead to either the suspension or the cancellation of these frequency assignments in some cases;

…

Note: Additional recognizings could be added during WRC-15.

resolves

1 that the following information shall be provided by the notifying administration when an in-orbit satellite is used to bring into use (BiU) or bring back into use (BBiU) frequency assignments to a satellite network at a given orbital position and that same in-orbit satellite was previously used to bring into use (BiU) or bring back into use (BBiU) another satellite network filing:

A – the previous orbital position of the in-orbit satellite used to bring into use (BiU) or bring back into use (BBiU) frequency assignments to GSO satellite network;

B – the date the satellite, used to BiU or BBiU frequency assignments to GSO satellite network, left the previous orbital position; and

C – the name of the ITU filing(s) used by the in-orbit satellite at the previous orbital position;

2 that the information referred to in *resolves* 1 shall be provided with the confirmation of the BiU or the BBiU as required per Nos. **11.44B**, **11.49B** or other relevant provisions in Appendices **30**, **30A** or **30B**;

3 that, if the notifying administration does not have the information as required per *resolves* 1 because the in-orbit satellite was under the responsibility of another administration, the notifying administration shall provide instead the name of the administration that was responsible for the in-orbit satellite at its previous orbital position,

instructs the Radiocommunication Bureau

1 to make available the information provided in *resolves* 1 on the ITU website within 30 days of its receipt;

2 to publish the name of the administration identified under *resolves* 3 while seeking from that administration the information referred to in *resolves* 1 as appropriate and to make it available on the ITU website within 30 days of receipt of this information.

5/7/8.6.6 Method H6

ARTICLE 11

Notification and recording of frequency assignments[1, 2, 3, 4, 5, 6, 7, 7*bis*] (WRC-12)

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

MOD

11.44B A frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. The notifying administration shall so inform the Bureau within thirty days from the end of the ninety-day period. See also Resolution **[A7H] (WRC-15)**. (WRC-~~12~~15)

ADD

DRAFT NEW RESOLUTION [A7H] (WRC-15)

Use of one space station to bring frequency assignments to geostationary satellite networks at different orbital locations into use within a short period of time

The World Radiocommunication Conference (Geneva, 2015),

considering

a) that the use of the same space station to bring frequency assignments to geostationary satellite networks located at different orbital locations into use within a short period of time could lead to an inefficient use of spectrum/orbit resources;

b) that there are legitimate reasons why a notifying administration may need to move a spacecraft from one orbital position to a new orbital position;

c) that care should be taken not to constrain the legitimate use of satellite manoeuvres and management,

noting

a) that WRC-12 recognizes that the issue of using one space station to bring frequency assignments at different orbital locations into use within a short period of time was not the intent for its adoption of the revisions of Nos. **11.44**, **11.44.1**, **11.44B** and **11.49**;

b) that WRC-12 requested ITU-R to study further this issue and decided that, until ITU-R studies are completed, where an administration brings into use frequency assignments at a given orbital location using an already in-orbit satellite, the Bureau is requested to make an enquiry to that administration as to the last previous orbital location/frequency assignments brought into use with that satellite and make such information available,

resolves

1 that the same space station shall not be used to bring into use, or resume the use after suspension of, frequency assignments to geostationary satellite networks at more than (2-3) different orbital locations within (any 1 year);

Note: The numbers in round brackets are indicative and subject to further discussions with other administrations to achieve, as much as possible, a consensual explanation of what constitutes undesirable "satellite hopping".

2 that, when declaring bringing into use, or resumption of use after suspension, of frequency assignments to geostationary satellite networks, notifying administrations shall indicate to the Bureau whether this has been done with a newly-launched satellite or with an already in-orbit satellite (for the sole purpose of this Resolution, a newly-launched satellite is one that has never been used to bring into use, or resume the use of, frequency assignments);

3 that, when a notifying administration has indicated, pursuant to *resolves* 2 above, that it has brought into use, or resumed the use after suspension of, frequency assignments to geostationary satellite networks with an already in-orbit satellite, the Bureau shall request the notifying administration to indicate on which orbital position the in-orbit satellite was previously located and which satellite network was brought into use at the previous orbital location using the in-orbit satellite;

4 that, if the information provided by the notifying administration under *resolves* 3 above shows that the bringing into use or the resumption of use after suspension contradicts *resolves* 1 above, the Bureau shall refer the case to the Radio Regulations Board;

5 that, if, following consideration of a case referred by the Bureau under *resolves* 4 above, the Radio Regulations Board concludes that the bringing into use or the resumption of use after suspension contradicts *resolves* 1 above, it shall instruct the Bureau to consider the frequency assignments to the geostationary satellite network as not having been brought into use, or resumed into use, and to implement the subsequent applicable regulatory procedures.

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