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## **Space Services Department**

# **THE NOTIFICATION AND RECORDING OF FREQUENCY ASSIGNMENTS IN THE SPACE SERVICES**

## **1 Introduction**

The Notification of frequency assignments presents the final regulatory step before frequency assignments can be recorded into the Master International Frequency Register (MIFR). The provisions related to Notification of frequency assignments in the non-planned services are primarily stipulated in Article **11** of the Radio Regulations.

The aim of this paper is to provide a general description of the Notification procedure for space services stipulated in the Article **11**. In line with this, relevant provisions associated with this procedure will be highlighted and discussed. The paper also utilizes the Bureau's experience gained through processing of the notice forms to compile a checklist which administrations can use for checking their notices before submission. Some common mistakes encountered by the Bureau in this process are also highlighted to help administrations to comply with the notification procedure.

## **2 The notification provisions**

The provisions detailing the requirement for notification of frequency assignments to the Bureau are basically specified in the Article **11** of the Radio Regulations.

Table I below details other parts of the Regulations where Article **11** is referred to for certain services in the non-planned bands in respect to services in the planned bands.

TABLE I  
Notification Provisions References

Categories of Space Services	Provisions	Remark
All space services except those listed below	Article 11	
Fixed-satellite service in the frequency bands 11.7-12.2 GHz (in Region 2), 12.2-12.7 GHz (in Region 3) and 12.5-12.7 GHz (in Region 1)	Article 7 of Appendix 30 (when the planned band broadcasting-satellite service is involved)	Cross-reference to application of Article 11
Fixed-satellite service (space-to-Earth) in the frequency bands 17.7-18.1 GHz ( in Regions 1 and 3), 17.7-17.8 GHz (in Region 2) and broadcasting-satellite service in the frequency bands 17.3-17.8 GHz (in Region 2) 14.5-14.8 GHz (Earth-to-space) fixed-satellite service and space research service	Article 7 of Appendix 30A (when the planned band feeder link for broadcasting-satellite service is involved)	Cross-reference to application of Article 11
Fixed-satellite service in the frequency bands 4 500-4 800, 6 725-7 025 MHz, 10.7-10.95, 11.2-11.45 GHz and 12.75-13.25GHz	Article 8 of Appendix 30B	Cross-reference to application of Article 11

### 3 What needs to be notified

As specified in Nos. 11.2 and 11.9, any frequency assignment to transmitting and receiving stations shall be notified to the Bureau:

- a) if the use of that assignment is capable of causing harmful interference to any service of another administration; or
- b) if the assignment is to be used for international radiocommunication; or
- c) if that assignment is subject to a world or regional frequency allotment or assignment plan which does not have its own notification procedure; or
- d) if that assignment is subject to the coordination procedure of Article 9 or involved in such a case; or
- e) if it is desired to obtain international recognition for that assignment; or
- f) if it is a non-conforming assignment under No. 8.4 and if the administration wishes to have it recorded for information.

Since one or more of the above conditions apply to any earth or space stations used for transmission or reception, it can be safely said that all assignments related to space services would need to be notified.

## **4 When to initiate the notification procedure**

### **4.1 Space stations**

In pursuance to provision No. **11.44.1**, the first notice for recording the space station frequency assignments must be carried out before the end of seven years from the date of receipt 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**.

The notification procedures of space station generally can be initiated upon the completion of the Advance Publication procedure for assignments which do not require coordination under Sect II of Article **9**.

As for assignments of space stations which require coordination under Sect II of Article **9**, the notification procedure can be initiated upon the completion of the coordination procedure. However, if there is continuing disagreement between administrations and the assistance of the Bureau is sought, the Bureau may examine the notice under No. **11.32A** or **11.33** and shall act in accordance with No. **11.38**, that is either to record the assignments in the Master Register in case of a favourable finding or to return the notice of assignments to the notifying administration in case of an unfavourable finding.

The provision No. **9.1** allows the notification information to be communicated at the same time as the advance publication procedure. In such cases, the date of receipt of the notification information shall be considered as having been received by the Bureau not earlier than six months after the date of publication of the advance publication information.

### **4.2 Earth stations**

One of the conditions for establishing favourable finding to assignments of earth stations with respect to No. **11.32** is that the corresponding assignments of the space station must already be recorded into the MIFR with a favourable No. **11.32** Finding. Therefore, this implies that the notification procedure for an earth station should be initiated only after the notification procedure for the associated space station has commenced or completed.

## **5 What are the notification procedures**

The notification procedures contained in Article **11** of the Radio Regulations are basically presented in two sections which are:

- I) Section I – Notification, and
- ii) Section II – Examination and recording of frequency assignments.

These two sections can be further generalized, with procedures encapsulated in Section I being primarily description of procedures related to initiating the notification procedure and those in Section II, to procedures relating to the processing and recording or returning of the notification information.

## 5.1 Section I – Notification

In order to initiate the Notification procedure, the administration shall in accordance to No. **11.15**, provide the relevant characteristics in Appendix 4.

When providing these characteristics, administrations should take note of Resolution **55 (Rev.WRC-15)**, which requires all notice forms (AP4/II and III) for satellite networks and earth station submitted to the Bureau pursuant to Article **11** after 3 September 2000 to be in electronic format which is compatible with the BR electronic notice form capture software (SpaceCap). The description of the required information as well the data structure of these electronic forms are provided in Appendix 4 of the Radio Regulations and Circular Letter No. 58.

Resolution **55 (Rev.WRC-15)** also specifies that as from 3 June 2000, all graphical data associated with the Notice forms should be in graphics data format which is compatible with the BR data capture software(GIMS). This currently covers antenna diagrams of gain contour, service area and space station antenna gain in the direction of the geostationary orbit, for geostationary satellites. Submission of graphics in paper form will, however, continue to be accepted.

The table below provides the address paths of the ITU website where the electronic notification software tools and aids can be retrieved. In addition, these tools can be also retrieved from the BR-IFIC on DVD ROM.

TABLE II

**Guide for Retrieving Notification Software Tools & Aids**

<b>Notification Software Tools and Aids</b>	<b>Description</b>	<b>Internet address path to follow</b>
Space Data Capture Software (SpaceCap)	Electronic AP4/II and III forms	<i>www.itu.int</i> → <i>Radiocommunication (ITU-R)</i> → <i>Space Services</i> → <i>Space Software</i> → <i>SpaceCap</i> <i>http://www.itu.int/en/ITU-R/software/Pages/spacecap.aspx</i>
Space Filing Validation Software (SpaceVal)	PC-based software for validating electronic notices captured by the SpaceCap software	<i>www.itu.int</i> → <i>Radiocommunication (ITU-R)</i> → <i>Space Services</i> → <i>Space Software</i> → <i>Space Val</i> <i>http://www.itu.int/en/ITU-R/software/Pages/spaceval.aspx</i>
GIMS	PC-based software package which allows the capture, modification and validation of graphical data relating to the electronic notification of satellite networks.	<i>www.itu.int</i> → <i>Radiocommunication (ITU-R)</i> → <i>Space Services</i> → <i>Space Software</i> → <i>GIMS</i> <i>http://www.itu.int/en/ITU-R/software/Pages/gims.aspx</i>
Space Publication Software (SpacePub)	PC-based software utility for <b>printing satellite networks / earth stations</b>	<i>www.itu.int</i> → <i>Radiocommunication (ITU-R)</i> → <i>Space Services</i> → <i>Space Software</i> → <i>SpacePub</i> <i>http://www.itu.int/en/ITU-R/software/Pages/spacepub.aspx</i>

The notifications “as received” from the administrations are then made available by the Bureau in the International Frequency Information Circular (IFIC) DVD-ROM, within 30 days of receipt, and also on the ITU website at the following path :-

[www.itu.int](http://www.itu.int) → Radiocommunication (ITU-R) → Space Services → SNL → More → INFORMATION “AS RECEIVED”(PART-C), RES 55 (Rev.WRC-15)<sup>1</sup>

**5.1.1 Useful reminders when submitting notification information**

In order to avoid unnecessary delay or possible return of notices, it is important to ensure that the forms are filled up accurately and correctly with all the mandatory data in electronic format. In this respect, administrations are urged to validate their notices with the validation tool provided through the SpaceVal and GIMS software, prior to submitting them.

<sup>1</sup> The “as received” information has not undergone check for completeness and may or may not be complete. It is simply information as when it was submitted to the Bureau.

If coordination is necessary for the notified assignment or there exist additional coordination requirement as a result of some modification to the characteristics of the assignment, the most up-to-date coordination information that corresponds to coordination requirement should be provided. In addition, whenever more than one form of coordination has been carried out, the various coordination procedures which have been carried out should be appropriately identified.

It is also important to stress that a notice which is not supported by the 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**, is not receivable and will be returned to the notifying administration. Therefore, it is important to ensure that all the frequency assignments are covered by the frequency bands provided in the related advance publication. A new advance publication is required to cover the use of any additional frequency band or modification of the orbital location in the case of a space station using the geostationary-satellite orbit<sup>2</sup>

The various time constraints specified in Nos. **11.44**, **11.44.1** and **11.25** should also be taken into consideration when submitting information for notification.

In order to facilitate the task of providing correct and complete information, a list containing essential items to be checked before the submission of the notice has been presented towards the end of this paper (in Section 6).

## **5.2 Section II – Examination and recording of frequency assignments**

### **5.2.1 Check for non-receivables and completeness of submitted information**

Upon receiving the notices, the Bureau as specified in No. **11.27**, shall check for the completeness of the notice. The complete notices are examined by date order of receipt (Nos. **11.28** and **11.29**) and notices which have a technical bearing on an earlier notice cannot be treated until the earlier notice has been dealt with.

The formal date of receipt is established when the Bureau confirms that the information submitted by the administration is complete and correct. Accordingly, where a notice received by the Bureau does not contain all of the mandatory information as defined in the Table (Annex 2) of AP4 of the Radio Regulations, the Bureau shall immediately inform the administration and seek the information not provided. Further processing of the notice by the Bureau will remain in abeyance and a date of receipt will not be established until the missing information is received.

If upon the establishment that all mandatory data information have been submitted and there are further clarification required concerning the correctness of the data submitted, the Bureau shall request the administration to provide the clarification within 30 days. If the information is received within the 30 days period, the original date of receipt of all the mandatory information is retained, otherwise, a new date of receipt will be established. After one year, any pending submission containing incomplete information or clarification shall be returned to the notifying administration.

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<sup>2</sup> As specified in No. **9.2C**.

Other circumstances which can lead to a notice being not receivable and returned are summarized in Table III below:

TABLE III

**Circumstances that can lead to the notice being considered as not receivable**

A notification received by the Bureau earlier than the date limit prescribed in provisions No. <b>11.25</b> (date of bringing is more than 3 years from the date of notification)
A notice for a particular procedure is receivable only if the previously applicable procedures have been effected. If not, the notice will be deemed not receivable. Examples are: i) A notification received under No. <b>11.2</b> or <b>11.9</b> relating to a satellite network, or an earth station whose associated space station, is not supported by an advance publication ii) A notification received under No. <b>11.2</b> or <b>11.9</b> for a satellite network which is not supported by a publication of a request for coordination referred to in Nos. <b>9.30</b> and <b>9.32</b> .
A notification received under No. <b>11.2</b> or <b>11.9</b> relating to a satellite network/system for which either the regulatory time limit(7 years) has expired or the due diligence information as prescribed by Resolution <b>49</b> has not been provided.

In each case when a form of notice is returned by the Bureau, the necessary justification for such an action shall be provided to the notifying administration.

Complete notices are published in Part I-S of the BR IFIC DVD-ROM. The published information in Part I-S will be used for more detailed examination and may differ from those published “as received”.

### 5.2.2 Examinations of Notices

The Bureau shall examine each notice with respect to

- i) its conformity with the Table of Frequency Allocations and the other<sup>3</sup> provisions of the Radio Regulation (No. **11.31**);
- ii) conformity with the coordination procedures (No. **11.32**);
- iii) the probability of harmful interference (Nos. **11.32A** and **11.33**), if requested.

It is worthwhile to note that the examination of the notices is carried out at assignment level since the findings are established at this level. Therefore, it is possible that within a group of assignments, different findings may exist for each assignment. These situations where different findings exist within a group of assignments are often referred to as “split findings”, as the group of assignments will be split to appropriately reflect the finding associated to each assignment. As findings are established at assignment level, different frequency assignments may be notified at different times.

#### 5.2.2.1 Examination in accordance to No. 11.31

A general list of examinations which are carried out under No. **11.31** is provided in the table below.

<sup>3</sup> The “other provisions” are identified in the Rules of Procedure of No. **11.31**.

TABLE IV

**Types of examination under No. 11.31**

<b>Provisions</b>	<b>General Description of the Examination</b>
Art 5	Checks if frequency is in compliance with Table of Frequency Allocation including footnotes
Art 21 Sect III	Checks that power limits of earth stations are complied
Art 21 Sect IV	Checks that minimum elevation angles of earth stations are complied
Art 21 Sect V	Checks that limits of power-flux density (PFD) from space stations are complied
Article 22 Sect II	Checks the PFD limits on NGSO networks are complied
Article 22 Sect III	Checks that station keeping of space stations are complied
Article 22 Sect IV	Checks that pointing accuracies of antennae on geostationary satellites are complied
Article 22 Sect VI	Checks that earth station off-axis power limitations in the fixed-satellite service are complied
Article 23 Sect II	Checks the condition “a space station in the BSS shall reduce to the maximum the radiation over the territory of other countries unless an agreement has been previously reached with such countries” is complied
9.21	Checks if agreement has been achieved when applicable
4.4	To recognize when a station is operating with frequency in derogation of the Table of Frequency Allocations and Regulations and under non-interference and unprotected basis

When the examination with respect to No. 11.31 leads to a favourable finding, the assignment shall be recorded in the Master Register or examined further to Nos. 11.32 to 11.33, as appropriate.

It should be noted that even if an assignment is found unfavourable under No. 11.31, the assignment can be recorded in the Master Register for information purposes and subject to application of No. 8.5 (which is to immediately eliminate harmful interference upon advise that harmful interference is caused by the assignment), if the administration undertakes that the assignment will be operated in accordance to No. 4.4 which is on a non-interference and no protection basis.

It is also worth noting that where the agreement of other administrations is required for operating assignments which exceeds limits of Article 21 or 22 over their territories, the Bureau will formulate a favourable finding under No. 11.31 only if it is informed that such agreement exists with these other administrations. This agreement is treated separately from the coordination agreement required under No. 9.6. The same approach is taken when checking agreement under No. 9.21 where the Bureau treats the agreement obtained under No. 9.21 as separate from the coordination agreement under No. 9.6.

**5.2.2.2 Examination in accordance to No. 11.32**

Examination under No. 11.32 is basically to determine whether the appropriate coordination procedure has been successfully completed. When the examination with respect to No. 11.32 leads to a favourable finding, the Bureau shall as stipulated in No. 11.37, record the assignment in the Master Register indicating the administrations with which the coordination procedure has been completed. When the findings is unfavourable, the notice shall be returned to the notifying administration, with an indication of the appropriate actions, if No. 11.32A or 11.33 do not apply.



It is important to note that the Bureau for practical reasons could not systematically undertake the comparison of coordination information contained in the notice form submitted under No. **11.2** or **11.9** and that from the voluminous correspondence from the coordination phase. Therefore, the No. **11.32** examinations of the Bureau will be based on the coordination information available from the notice forms (Boxes A5/A6). The Bureau will consider the notified data of the network submitted in the notice form as coordinated with those countries mentioned in boxes A5/A6. Administrations are thus advised to fill the boxes A5/A6 carefully with accurate information.

In this regard, administrations should also take note of Circular Letter No. 124 dated 25 June 1999, where should the result of coordination given by the administration during notification differs from coordination requirement published in the special sections, the administration is requested to make specific reference to the relevant regulatory provisions for explaining the difference.

#### **5.2.2.2.1 Examination of space station assignments in relation to No. 11.32**

One of the first things to establish when carrying out examination on space stations in relation to No. **11.32** is to verify if the characteristics of the notification information is the same as or within the envelope of, the characteristics of the coordination information.

##### **i) Notified characteristics different from coordination characteristics**

If the notified characteristics are found to be different from those published, interference calculations are made on the basis of Appendix 5. If additional administrations (other than those listed in corresponding Special Sections in boxes A5/A6) which either receive more interference or cause more interference are identified due to the modified characteristics, an unfavourable finding shall be given if these additional administrations are not found in the A5/A6 columns of the Notification forms.

##### **ii) Notified characteristics similar to coordination characteristics**

In cases when the notified characteristics are identical or covered by those published in the Special Sections, the result of calculations/examination already made for these Special Sections is used. The examination with respect to coordination shall be carried out by comparing the lists of administrations indicated in the Boxes A5/A6 of the notice forms against those published in the coordination Special Section.

#### **5.2.2.2.2 Examination of earth station assignments in relation to No. 11.32**

The examination of earth station in relation to No. **11.32** is basically divided into three parts which are:

##### **i) establishment of whether the associated space station has been registered into the MIFR**

The examination of frequency assignments to earth stations with respect to the application of Nos. **9.7**, **9.12**, **9.12A** and **9.13**, shall be carried out by verifying the status of the corresponding assignments of the associated space station.

In the case of a space station recorded with a Favourable No. **11.32 (11.32A)** finding, the assignment to the associated earth station shall be assumed to have been coordinated and shall be given a Favourable Finding with the following indication in the coordination information column:

- Z/9.7, 9.12, 9.12A or 9.13 (as the case maybe)/----- followed by the names of administrations appearing in the coordination information column under the symbol 9.7, 9.12, 9.12A or 9.13/----- of the associated space station and;

- 9.7, 9.12, 9.12A or 9.13 (as the case maybe)/---- followed by the names of administrations indicated with the notice of the earth station, if appropriate.

In the case when the associated space station is not recorded into the MIFR, an earth station shall be given an unfavourable finding on the basis that the leading element of a space network is the space station and thus an earth station cannot be recorded in the MIFR before its associated space station.

**ii) establishment of whether the earth station being notified has completed coordination**

The examination with respect to coordination under Nos. **9.15, 9.17** and **9.17A**, of frequency assignments to earth stations shall be carried out by comparing the lists of administrations indicated in the Boxes A5/A6 of the notice forms against those identified by the Bureau based on the coordination area of notified earth stations.

**iii) establishment of whether the earth station is located within the coordinated service area of the associated space station**

Earth stations outside the service area of the associated space station shall be given Unfavourable Finding assuming that the coordination of the associated space station could not have taken account of earth stations outside the service area.

**5.2.2.3 Examination in relation to Nos. 11.32A and 11.33**

The examination of the probability of harmful interference under No. **11.32A** is carried when the notifying administration states that procedure for coordination under No. **9.7, 9.7A, 9.7B, 9.11, 9.12, 9.12A, 9.13** or **9.14** could not be successfully completed for the assignments being notified.

Similarly, the examination of the probability of harmful interference under No. **11.33** is carried out in the case when the notifying administration states that procedure for coordination under No. **9.15, 9.16, 9.17, 9.17A** or **9.18** could not be successfully completed for the assignments being notified.

The calculation method to access the probability of harmful interference for coordination and the criteria for the formulation of the Findings under No. **11.32A** for cases under No. **9.7**, are contained in Section B3 of Part B of Rules of Procedure. In the frequency bands 5 725-5 850 MHz (Region 1), 5 850-6 725 MHz and 7 025-7 075 MHz (Earth-to-space) for satellite networks having a nominal orbital separation in the geostationary-satellite orbit of more than 7°, and in the frequency bands 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz (Region 2), 12.2-12.5 GHz (Region 3), 12.5-12.7 GHz (Regions 1 and 3) and 12.7-12.75 GHz (space-to-Earth) and 13.75-14.5 GHz (Earth-to-space) for satellite networks having a nominal orbital separation in the geostationary-satellite orbit of more than 6°, Resolution **762 (WRC-15)** shall apply instead of the calculation method in the Rules of Procedure.

When the examination with respect to No. **11.32A** or **11.33** leads to a favourable finding, the assignments shall be recorded in the Master Register indicating the names of the administrations with which coordination was completed and those with which it was not completed but in respect of which the finding was favourable.

When the Bureau is not in a position to conduct the examination under No. **11.32A** or **11.33** (e.g. in cases where calculation method does not exist), it is assumed that the finding under No. **11.32A** or No. **11.33** is unfavourable in accordance with No. **11.35**.

In cases of unfavourable finding, the notice shall be returned with an indication of the appropriate action.

#### **5.2.2.4 Recording in MIFR through No.11.41**

It should be noted that even after Unfavorable Finding<sup>4</sup> under No. **11.32A** or **11.33**, it is still possible for the assignment to be entered into the MIFR through the provision of No. **11.41**. When submitting notices in application of No. **11.41**, the notifying administration shall indicate to the Bureau that efforts have been made to effect coordination with those administrations whose assignments were the basis of the unfavourable findings under No. **11.38**, without success (please see No. **11.41.2**).

Should the coordination procedure specified in No. **11.32** be completed with an administration whose assignments were the basis for the recording made under No. **11.41**, then, based on the updated information sent by the notifying administration, the relevant remarks or indications relating to assignments for which an unfavourable finding led to their recording under No. **11.41** shall be removed (please see No. **11.41B**).

Should harmful interference actually be caused by an assignment recorded under No. **11.41** to any recorded assignment which was the basis of the unfavourable finding, the administration responsible for the station using the frequency assignment recorded under No. **11.41** shall, upon receipt of a report providing the particulars relating to the harmful interference, immediately eliminate this harmful interference as stated in provision No. **11.42**.

In applying No. **11.42** with respect to satellite networks, administrations involved shall cooperate in the elimination of harmful interference and may request the assistance of the Bureau, and shall exchange relevant technical and operational information required to resolve the issue. Should any administration involved in the matter inform the Bureau that all efforts to resolve the harmful interference have failed, the Bureau shall immediately inform other involved administrations and prepare a report, together with all necessary supporting documents (including comments from the administrations involved), for the next meeting of the Board for its consideration and any required action (including the possible cancellation of the assignment recorded under No. **11.41**), as appropriate. The Bureau shall thereafter implement the decision of the Board and inform the administrations concerned as stated in provision No. **11.42A**.

#### **5.2.2.5 Resubmission of notice as a result of unfavourable finding under Nos. 11.31, 11.32 or No. 11.32A**

There exist a difference in the treatment of the date of receipt for assignments resubmitted as a result of

- i) unfavourable finding under No. **11.31**, and
- ii) unfavourable finding under No. **11.32**.

Assignments resubmitted for notification as a result of unfavourable finding under No. **11.31**, are not subjected to No. **11.46** and will have a new date of receipt upon resubmission.

On the other hand, assignments resubmitted for notification as a result of unfavourable finding under No. **11.32** or No. **11.32A** is subjected to No. **11.46**. If the resubmitted information is found favourable and is received within six months from the date on which the original submission was returned by Bureau, the original date of submission will be used for recording. However, if the resubmission is received by the Bureau more than six months after the date on which the original

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<sup>4</sup> Also applicable in cases where the Bureau is not in a position to conduct the examination under No. **11.32A** or **11.33**, the Bureau shall immediately inform the notifying administration, which may then resubmit its notice under No. **11.41**, under the assumption that the finding under No. **11.32A** or **11.33** is unfavourable.

submission was returned by the Bureau, this information shall be considered a new notice and will be given a new date of receipt.

### **5.3 Where are the findings published**

Favourable findings are published under Part II-S of the BR-IFIC DVD-ROM and the date of receipt of the assignment is recorded in Column 2D of the Master Register.

Unfavourable assignments are published in Part III-S of the BR-IFIC DVD-ROM and the notice is returned to the notifying administration by airmail, together with the reasons for its return and any suggestions the Bureau may be able to offer.

Administrations can also monitor the BR-IFIC publications through the Space International Frequency Information Circular Databases Online following the path described below. The information retrieved is in MS Access database format and is best viewed using the SPACEPUB software(See Table II).

[www.itu.int](http://www.itu.int) → Radiocommunication(ITU-R) → Space Services → BR IFIC → BR IFIC data

All administrations should carefully check the information published in Part-IS and Part-IIS of the IFIC because the coordination requirements that are checked by the Bureau are only those based on the information in boxes A5/A6 of the notice form provided by the notifying administration.

Administrations may also comment with respect to the finding of an assignment to an earth station bearing symbol Z/9.7/... in Part II-S of the IFIC if they consider that their assignments to space services are likely to be affected. In this case, the Bureau examines the assignment to the earth station already recorded with respect to No. 9.7 by applying Appendix 8, taking into account satellite networks referred to in paragraph 1 of Appendix 5. As a result of this examination, the Bureau will either review or retain the finding initially reached for the assignment in question.

### **5.4 Modification of characteristics of assignments already recorded**

An administration can seek to change the characteristics of assignments already recorded in the Master Register (No. 11.43A). A notice of change in the characteristics of an assignment already recorded, shall again be examined by the Bureau under Nos. 11.31 to 11.33, as appropriate. In the case of a change which is in conformity with No. 11.31 and the Bureau reaches a favourable finding with respect to No. 11.32 or 11.33, as appropriate, or the changes do not increase the probability of harmful interference to assignments, the amended assignment shall retain the original date of entry in the Master Register.

In the case of a change which is in conformity with No. 11.31 and the Bureau reaches an unfavourable finding with respect to No. 11.32 or 11.33, as appropriate, or the changes increase the probability of harmful interference to assignments, the notifying administration is required to carry out coordination under Section II of article 9 with the modified characteristics.

In view of this, it is advisable that the coordination request for the modified assignments together with any additional coordination agreements which have been obtained for the modified assignments should be simultaneously submitted when a notification request under No. 11.43A is made.

## **6 Checklist for administrations**

Tables V and VI provide two list of items an administration should check before submission of the notification information to the Bureau.

TABLE V

**Checklist for earth station**

Ensure mandatory information is: <ul style="list-style-type: none"><li>• complete and correct</li><li>• and where required, accurate references to relevant publications are made</li></ul>
Check assignment for conformity with: <ul style="list-style-type: none"><li>• Article 5 (e.g. assigned frequency or bandwidth is not out of band, station is located in area where frequency band is allocated, footnotes limits are complied, etc.)</li><li>• Article 21</li><li>• Article 22</li></ul>
Check that the associated space station has been successfully coordinated and notified for the frequency assignments which is to be notified under the earth station
Ensure the earth station is inside the service area of the associated space station
<b>Ensure coordination/agreement of earth station is completed or obtained (9.7A, 9.15, 9.17, 9.17A, 9.21 whichever relevant)</b> Ensure the A5/A6 boxes are filled up correctly

TABLE VI

**Checklist for space stations**

Ensure mandatory information is: <ul style="list-style-type: none"><li>• complete and correct (Use Validation program)</li><li>• and where required, accurate references to relevant publications are made</li></ul>
Check if the relevant Advance Publication Information (API) exist for the assignments being notified Check that the notified frequency ranges are covered by the API
For assignments which require coordination/agreement, ensure that the relevant Coordination Requests (CR/C) exist for the assignments being notified (Nos. 9.7, 9.7B, 9.11, 9.11A, 9.12, 9.12A, 9.13, 9.14, 9.21, A30#7.1, A30A#7.1). Take note of the affected administrations listed in the CR/C and that these administrations were taken into account in coordination. Take note of the Bureau's finding in the CR/C and to rectify any assignments which received unfavourable findings.
Ensure relevant CR/D has been published (Nos. 9.11, 9.12, 9.12A, 9.13, 9.14, 9.21)

Take note of the administrations listed in the CR/D and that these administrations were taken into account in coordination.
Ensure the time limits specified in Nos. <b>11.44</b> , <b>11.25</b> , <b>11.43A</b> and <b>11.44.1</b> are complied
Check assignment for conformity with: <ul style="list-style-type: none"><li>• Article <b>5</b> (e.g. assigned frequency or bandwidth is not out-of-band, station is located in area where frequency band is allocated, footnotes limits are complied, etc.)</li><li>• Article <b>21</b></li><li>• Article <b>22</b></li></ul>
For assignments which require coordination under Section II of Article <b>9</b> , <ul style="list-style-type: none"><li>• Ensure the coordination data and notification data to be submitted are similar, if there are no intended modifications</li><li>• Ensure required coordination has been completed</li><li>• If result of coordination differs from those published during coordination procedure, explain difference making reference to regulatory provisions</li><li>• Ensure the Column A5/A6 is filled out correctly</li></ul>

## **7 Common mistakes encountered by the BR during the processing of notification information**

### **7.1 Incorrect file formats of electronic notice forms**

The Spacecap, GIMS and the SpaceVal software are highly recommended for the preparation of submissions in electronic format. When submitting the notice, only the MS-Access format files (with .mdb extension) should be submitted to the Bureau, and not the Acrobat (.PDF) or Word (.doc) format files.

### **7.2 Application of No. 4.4 for unfavourable finding under No. 11.32**

An assignment to a space service can be recorded in the Master Register with reference to No. **4.4** only in the case of an Unfavourable Finding with respect to No. **11.31**. This means that No. **4.4** can be applied to non-conformity with coordination under No. **9.21**.

However, it must be stressed that an assignment which is in conformity with the Table of Frequency Allocation but for which the relevant coordination procedure (e.g. Nos. **9.7** to **9.19**) has not been completed, cannot be recorded under No. **4.4**.

### **7.3 A description explaining how steerable beams will meet PFD limits is not provided in cases when the PFD hard limits are exceeded**

In cases where frequency assignments in steerable beams of a satellite network exceed the applicable hard PFD limits, the Bureau will establish favourable finding only if:

- i) there is at least one position of the steerable beam where the applicable PFD limits are met without any reduction of the notified power density; and

- ii) the administration states that the applicable PFD limits will be met by applying a method, the description of which should be submitted to the Bureau. One possible example of such a method is provided in the Annex 1 of Article 21 RoP.

#### **7.4 Coordination has not been completed or the A5/A6 boxes left completely empty**

In accordance to No. 9.6, before an administration notifies to the Bureau or brings into use any frequency assignment referred to in this provision, it shall effect the required coordination with any other administration whose assignments might be affected. This implies that the required coordination of the assignment in question should normally be completed before the assignment is notified. Administrations are therefore reminded to ensure that the A5/A6 boxes are filled in correctly.

Administrations should also take note of Circular Letter No. 124, where should the result of coordination given by the administration during notification differs from coordination requirement published in the special sections, the administration is requested to make specific reference to the relevant regulatory provisions for explaining the difference. Similarly, administrations should also provide explanation using regulatory provisions if the boxes A5/A6 are intentionally left empty. Alternately, these differences can be explained in the cover letter of the notice.

In addition, whenever more than one form of coordination has been carried out, the various coordination procedures carried out under the relevant provisions should be appropriately identified and the agreements obtained under each provision clearly indicated.

#### **7.5 Characteristics are unintentionally modified resulting in additional coordination requirement**

If the characteristics of an assignment being notified are unintentionally modified from that published for coordination, this may result in additional coordination requirement (i.e. coordination with additional administrations). As a consequence, unfavourable finding under No. 11.32 may be given because of incomplete coordination. Some examples are

- i) antenna patterns are modified. Modifying antenna patterns without an indication that it has been coordinated can introduce additional coordination requirement which will result in a No. 11.32 unfavourable finding;
- ii) similarly, power densities which have been modified without an indication that it has been coordinated can suffer the same consequences;
- iii) a notified frequency assignment is not covered or only partially covered by the API or coordination publication.

For any intentional modification, the administration should highlight what these modifications are to the Bureau and ascertain that the additional coordination requirement has been complied.

#### **7.6 Typical earth stations which are not mobile earth stations type are submitted for notification**

An administration that wishes to secure international recognition of a satellite network vis-à-vis other satellite networks, can notify the typical characteristics with indication of the whole service area in which that earth station is intended to operate. In doing so, administrations should use the notice forms AP4/II. Such notified assignments are examined under No. 11.32 by the Bureau with respect to conformity with the provisions Nos. 9.7, 9.12 and 9.13, but not Nos. 9.15, 9.17 and 9.17A.

Nevertheless, in accordance with Nos. **11.17** and **11.22**, when the Appendix 7 coordination area associated with a typical earth station (with the exception of mobile earth stations) overlaps the territory of another country in which the same frequency band is allocated with equal rights to terrestrial services, it is then necessary to notify individual earth stations using one AP4/III notice form for each location.

#### **7.7 Maximum seven years to bring into use of assignments and submit the first notice under No. 11.15**

The notified date of bringing into use of any frequency assignment to a space station of a satellite network 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 (Please see No. **11.44**).

Space station frequency assignments that are brought into use prior to the completion of the coordination process, and for which the Resolution **49 (Rev.WRC-12)** or Resolution **552 (WRC-12)** data, as appropriate, have been submitted to the Bureau, the assignment shall continue to be taken into consideration for a maximum period of seven years from the date of receipt of the relevant information under No. **9.1A**. If the first notice for recording of the assignments in question under No. **11.15** related to No. **9.1** or No. **9.1A** has not been received by the Bureau by the end of this seven-year period, the assignments shall be cancelled by the Bureau after having informed the notifying administration of its pending actions six months in advance (Please see No. **11.44.1**).

##### **7.7.1 Notified date of bringing into use**

The notified date of bringing into use of a frequency assignment to a space station in the geostationary-satellite orbit shall be the date of commencement of ninety-day period, which is 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. On receipt of the information the Bureau shall make that information available on the ITU website as soon as possible and shall publish it in the BR IFIC. (Please see No. **11.44.2** and No. **11.44B**).

A frequency assignment to a space station in the geostationary-satellite orbit with a notified date of bringing into use more than 120 days prior to the date of receipt of the notification information shall also be considered as having been brought into use if the notifying administration confirms, when submitting the notification information for this assignment, that a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained for a continuous period of time from the notified date of bringing into use until the date of receipt of the notification information for this frequency assignment. (Please see No. **11.44B.2**)

When informing the Bureau of the bringing into use a frequency assignment, the information as requested in Resolution **40 (WRC-15)** shall be submitted to the Bureau.



### **7.7.2 Cancellation of Publications under Nos. 9.1A, 9.2B and 9.38**

If, after the expiry of the period of seven years from the date of receipt of the relevant complete information referred to in No. 9.1 or 9.2, in the case of satellite networks or systems not subject to Section II of Article 9 or in No. 9.1A in the case of satellite networks or systems subject to Section II of Article 9, the administration responsible for the satellite network has not brought the frequency assignments to stations of the network into use, or has not submitted the first notice for recording of the frequency assignments under No. 11.15, or, where required, has not provided the due diligence information pursuant to Resolution 49 (Rev.WRC-15) or Resolution 552 (WRC-15), as appropriate, the corresponding information published under Nos. 9.1A, 9.2B and 9.38, as appropriate, shall be cancelled, but only after the administration concerned has been informed at least six months before the expiry date referred to in Nos. 11.44 and 11.44.1 and, where required, § 10 of Annex 1 of Resolution 49 (Rev.WRC-15) as stated in No.11.48.

### **7.8 Due Diligence Information not submitted (Resolution 49 (Rev.WRC-12) or Resolution 552 (WRC-12))**

An administration notifying a satellite network for recording into the MIFR in the FSS, MSS or BSS and which frequency assignments are subject to coordination under Nos. 9.7, 9.11, 9.12, 9.12A and 9.13 in the unplanned bands, shall send to the Bureau as early as possible before the date of bringing into use or at the latest on the day of bringing into use, the due diligence information of the satellite network.

### **7.9 Suspension of a Recorded Assignment**

Wherever the use of a recorded frequency assignment to a space station 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 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 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. (Please see No. 11.49).

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. Resolution 40 (WRC-15) shall apply. (Please see No. 11.49.1).

### **7.10 Numerous Notification request for one Advance Publication Information (API)**

In accordance with the Rule of Procedure concerning the definition of a satellite network contained in No. **1.112**, each notification request can have only one set of orbital characteristics (See also Rule concerning the receivability of forms of notice). In the case where a further notification request making reference to the same information published under No. **9.1A or 9.2B** is received for processing by the Bureau, it is only receivable if the set of orbital characteristics included in that submission are unchanged relative to those in the earlier Notification submission or are intended to replace that earlier set of orbital characteristics. In all other cases a new publication under No. **9.1A or 9.2B** is required as the submission then pertains to a new satellite network.

### **7.11 Requests for application of No. 11.43A without a Coordination Request submission**

A proposed modification to recorded assignments might increase the potential for “causing” or “receiving” interference compared with assignments already recorded, and additional coordination requirements may be required. In order to meet these concerns and save administrations’ time, the coordination request for the modified assignments should be simultaneously submitted with the notification request. In addition, any additional coordination agreements which have been obtained for these modified parameters should also be indicated at notification.

As indicated in the Rule of Procedure relating to No. **11.43A**, if unfavourable findings are given in respect of the notification under No. **11.43A** because of missing coordination agreements, the notice under No. **11.43A** will be returned to the administration, but the recorded assignments will remain unchanged in the MIFR. In this case, the notifying administration could continue coordinating the modified assignments based on the coordination request special section mentioned above.

Following successful coordination, the administration might wish to send the notification again under No. **11.43A** together with the result of the successful coordination. If favourable findings are given in respect of the notification under No. **11.43A** prior to the publication of the coordination request, that coordination request will be returned to the administration without any action.

### **7.12 Request for upgrading of status with request for original 2D date to be retained**

WRCs often change the Table of frequency allocation, e.g. upgrading/downgrading of categories of service. In dealing with these cases, the Bureau adopts the following procedure:

- Downgrade – the Bureau informs concerned administrations that the status of their assignments in MIFR will be reviewed according to the change of the Table of Frequency Allocation.
- Upgrade – the Bureau informs all administrations of the changes made by WRCs and requires administrations to initiate relevant coordination if they wish to upgrade the status of their assignments. Thus the new date of receipt of assignments with an upgraded status will be established based on the date of receipt by the Bureau of notification under new allocations submitted by the notifying administration.

### **7.13 Requests for application of No. 11.41 without first applying No. 11.32A**

The request for application of No. **11.41**, which is seeking admission of frequency assignments into the MIFR, can be requested during or after an administration seek application of No. **11.32A**.

When seeking the application of No. **11.32A** or No. **11.41**, the notifying administration must state clearly that efforts have been made to effect coordination with those administrations whose assignments were the basis of unfavourable findings under No. **11.38**. for coordination under any of No. **9.7, 9.7A, 9.7B, 9.11, 9.12, 9.12A, 9.13 or 9.14** could not be successfully completed for the assignments being notified. Only when a declaration that coordination could not be successfully

completed would the Bureau examine the notice under these provisions since there should be a demonstration that coordination effort has been exerted but was not successful. Please see also No. **11.41.2**.

**7.14 The beam names indicated for earth stations are different from the beam names found in the associated space station**

An earth station is operated with a space station. As such, when providing the beam names of earth stations, ensure that these beam names matches the beam names of the associated space station. The beam names indicated should be the beam designation used in the filing of the associated space station and not the commercial beam names of the satellite.

**7.15 Progress report of Coordination Progress not referenced to the letter number and date of the notification letter submitted to the Bureau**

In order to ensure all information is taken into account in the examination of a notice, coordination progress reports should be referenced to the letter number and date of the notification letter submitted to the Bureau (if the progress reports are sent to the Bureau after the notice has been submitted for notification). In this regard, administrations are also encouraged to use tools made available for providing the most updated coordination status.

Similarly, if there are progress reports which have been sent to the Bureau before the actual notice was submitted to the Bureau for notification, the letter reference number and date of these progress reports should be indicated in the covering letter of the notice.

**7.16 Disregarding forms of coordination or coordination requirements which are applicable during notification (See provision No. 7.4A (WRC-03))**

When applying the provisions of No. **11.32**, the Bureau shall apply the provisions in force at the date of receipt of complete information submitted under No. **9.34**.

In the case:

- i) where a new form of coordination exists on the date of receipt of notification under Article **11**, where no such form existed at the coordination stage, the Bureau shall apply the forms of coordination in force on the date of receipt of complete Appendix **4** data under Article **11**;
- ii) a form of coordination or coordination requirements existed on the date of receipt of complete coordination data under Article **9** where no such form or coordination requirements exist on the date of receipt of complete notification data under Article **11**, the Bureau shall not take into account these forms of coordination or coordination requirements.

On another note, when applying the provisions of No. **11.31**, the Bureau shall apply the provisions in force at the date of receipt of the complete notice submitted under No. **11.15**.