THE NOTIFICATION AND RECORDING OF FREQUENCY ASSIGNMENTS IN THE SPACE SERVICES

Training Workshop on Satellite 28-30 September 2010 Bangkok, Thailand







OUTLINE OF PRESENTATION

•What needs to be notified When to notify -Space stations -Earth stations •Notification Tools and Aids – What are they – Where can they be found •Examinations carried out at Notification •Where findings are published



NOTIFICATION PROVISIONS

Non-planned services

Article 11 of the Radio Regulations



WHAT NEEDS TO BE NOTIFIED

- Frequency assignments of transmitting and receiving earth and space stations
 - Capable of causing harmful interference
 - Used for international radiocommunication
 - Subject to a world or regional frequency plan which does not have its own notification procedure
 - Subject to coordination procedure of Article 9
 - Seeking international recognition
 - Non conforming assignment under No. 8.4 seeking to be recorded into MIFR for information purposes only





WHEN TO INITIATE THE NOTIFICATION PROCEDURE(1)

SPACE STATIONS

•Assignments that do not require coordination under Sect II of Article 9

-Generally upon the completion of the Advance Publication procedure

•Assignments that require coordination under Sect II of Article 9

-Generally upon the completion of the Coordination procedure





WHEN TO INITIATE THE NOTIFICATION PROCEDURE(2)

No.11.44.1

The first notice for recording the space station frequency assignments must be carried out before the end of <u>7 years</u> from the <u>date of</u> <u>receipt</u> of (API) information under No. 9.1.

In the case where the API of the satellite network was <u>received prior to 22 November 1997</u>, the corresponding period will be <u>9 years</u> from the <u>date of publication</u> of the API information.







WHEN TO INITIATE THE NOTIFICATION PROCEDURE(3)

When notification information is communicated the same time as the advance publication procedure, the date of having received this information by the BR (No. 9.1) is established as follows:

•For Assignments that do not require coordination under Sect II of Article 9

6 months after the date of publication of API

•For Assignments that require coordination under Sect II of Article 9

6 months after the date of receipt of API



Notification submitted same time as API (where coordination is not required)





WHEN TO INITIATE THE NOTIFICATION PROCEDURE(4)

EARTH STATIONS

•One of the conditions for receiving favourable finding to earth station is that the corresponding space station must already be recorded into the MIFR

•Therefore, notification of earth station should be initiated only <u>after</u> the notification of the associated space station has started or completed



ARTICLE 11 NOTIFICATION PROCEDURE

SECTION I – Notification

Description of procedures related to initiating the notification procedure

•<u>SECTION II – Examination and recording</u> of frequency assignments

Description of procedures related to the processing and recording/or returning of the notification information



SECTION I - NOTIFICATION

•Provide the relevant characteristics as specified in Appendix 4 (No. 11.15)

•Res 55 requires all notice forms to be submitted in electronic format after 3 September 2000

•Graphical data can be submitted either in electronic format or paper form

CR58 - Electronic media submission format

•Tools available from BR IFIC on CD ROM, SNS on CD ROM and ITU Website



NOTIFICATION SOFTWARE TOOLS & AIDS(1)

Notification Software Tools & Aids	Description
Space Capture Software (SpaceCap)	Electronic AP4/II and III forms
Space Filing Validation Software (SpaceVal)	PC-based software for validating electronic notices captured by the SpaceCap software
Graphical Interference Management (GIMS)	PC-based software package which allows the capture, modification and validation of graphical data
Space Publication Software (SpacePub)	PC-based software utility for printing satellite networks / earth stations



NOTIFICATION SOFTWARE TOOLS & AIDS(2)

Notification Software Tools & Aids	Internet path to follow
Space Capture Software (SpaceCap)	www.itu.int-> Radiocommunication(ITU- R)->Space Services->Space Support->BR Soft->SpaceCap
Space Filings Validation Software (SpaceVal)	www.itu.int→ Radiocommunication(ITU- R)→Space Services→Space Support→BR Soft→SpaceVal
Graphical Interference Management (GIMS)	www.itu.int-> Radiocommunication(ITU- R)->Space Services->Space Support->BR Soft->GIMS
Space Publication Software (SpacePub)	www.itu.int-> Radiocommunication(ITU- R)->Space Services->Space Support->BR Soft->SpacePub

Committed to connecting the world

NOTIFICATIONS "AS RECEIVED"

Notifications "as received" are made available by the BR within 30 days (Res 55)

International Frequency Information Circular(IFIC) CD-ROM

•This information can also be monitored through the ITU website

www.itu.int → Radiocommunication(ITU-R) → Space Services → BR IFIC →Res.55 (WRC-00) List of information "as received"



USEFUL REMINDERS DURING NOTIFICATION SUBMISSIONS

•Ensure forms are filled up accurately and correctly – use SpaceCap, GIMS and SpaceVal software for preparation of submissions in electronic format

•Submit forms in electronic format – Access files with .mdb extension, and NOT the Acrobat (.PDF) or Word (.doc) files, should be submitted to the BR

•Ensure most up-to-date coordination information has been provided

•Ensure the relevant Advance Publication and Coordination Special Sections exist for the assignments being notified

•Take note of the regulatory time constraints (Nos. 11.44, 11.44.1, No.11.43A, RES49 and 11.25)



COMPLETENESS CHECK

Upon receiving the notices, the Bureau as specified in No. 11.27, shall check for the completeness of the notice.



INCOMPLETE NOTICES & NON-RECEIVABLES

•Mandatory data has not been provided or incorrect

•A notification received by the BR earlier than the prescribed date limit in No. 11.25

•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.

•Example

A notification relating to a satellite network, or an earth station whose associated space station, is not supported by an advance publication

A notification relating to a satellite network which is not supported by a publication of request for coordination



ESTABLISHMENT OF DATE OF RECEIPT OF NOTIFICATION(1)

•Formal date of receipt is established when the Bureau confirms that the information submitted is complete and correct

•Accordingly, where a notice does not contain all of the mandatory information as defined in the AP4 of the Radio Regulations, further processing of the notice will remain in abeyance and a date of receipt will not be established until the missing information is received.



ESTABLISHMENT OF DATE OF RECEIPT OF NOTIFICATION(2)

If upon establishment that all mandatory data have been submitted and there are further clarification required, 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 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.



PUBLICATION OF COMPLETE INFORMATION

•Complete notices are published in part I-S of the BR IFIC CD-ROM

•Complete notices will be used for further examination and may differ from those published "as received"



EXAMINATION OF NOTICES

•Regulatory deadlines – Nos. 11.25, 11.44, 11.44.1, 11.43A, RES 49

•No. 11.31- conformity with the Table of Frequency Allocations and other provisions of the Radio Regulations

•No. 11.32- conformity with the coordination procedures

•Nos. 11.32A & 11.33 – probability of harmful interference



Regulatory Deadline Check (1)

•No. 11.44.1

The first notice for recording of the assignments must be within 7 or 9 years¹

•No. 11.44

Notified date of bringing into use should be within 7 or 9 years¹

•No. 11.25

Date of bringing into use cannot be more than 3 years from date of notification

Note 1 : Depending on the date of receipt of the API





11.25 Earliest a notification can be submitted





•RES 49 – Due diligence information must be submitted at the latest on the date of bringing into use of the assignments

•No.11.43A – Assignments must be brought into use within 5 years from the date of the notification of the modification







EXAMINATION OF NOTICES

•Regulatory deadlines – Nos. 11.25, 11.44, 11.44.1, 11.43A, RES 49

•No. 11.31- conformity with the Table of Frequency Allocations and other provisions of the Radio Regulations

•No. 11.32- conformity with the coordination procedures

Nos. 11.32A & 11.33 – probability of harmful interference



No. 11.31 Examination(1)

•Article 5 – Table of Frequency Allocations

•Articles 21 & 22

Agreement under No. 9.21

Other relevant provisions



No. 11.31 Examination(2)

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



EXAMINATION OF NOTICES

•Regulatory deadlines – Nos. 11.25, 11.44, 11.44.1, 11.43A, RES 49

•No. 11.31- conformity with the Table of Frequency Allocations and other provisions of the Radio Regulations

•No. 11.32- conformity with the coordination procedures

•Nos. 11.32A & 11.33 – probability of harmful interference



No. 11.32 Examination(1)

 Basically, to determine the appropriate coordination procedure has been completed

•Findings will be based on information available on the A5/A6 boxes



No. 11.32 Examination(2)

Should the result of coordination during notification <u>differs</u> from coordination requirement, administration are requested to <u>make specific reference to</u> <u>the relevant regulatory provisions</u> (CR124) or provide explanation on cover letters





No. 11.32 Examination(3)

Space Stations

•Check if notified and coordination characteristics are similar

 If changes are within the envelope of those published in Special Section(s), the result of calculations already made for these Special Section(s) is used.




No. 11.32 Examination(4)

•If the notified characteristics are not within the envelope of coordination characteristics, relevant interference calculations are carried out on the basis of AP5

 If additional administrations are identified, and these additional administrations are not found in the agreements indicated in the A5/A6 boxes, an unfavourable finding shall be given





No. 11.32 Examination(5)

Earth Stations

•Establishment that the corresponding assignments of associated space station has been recorded into the MIFR

•Establishment that the earth station has completed coordination

•Establishment that the earth station is located in the service area of the associated space station



EXAMINATION OF NOTICES

•Regulatory deadlines – Nos. 11.25, 11.44, 11.44.1, 11.43A, RES 49

•No. 11.31- conformity with the Table of Frequency Allocations and other provisions of the Radio Regulations

•No. 11.32- conformity with the coordination procedures

•Nos. 11.32A & 11.33 – probability of harmful interference



The examination of the probability of harmful interference under Nos. 11.32A & 11.33 is carried out when the notifying <u>administration states that the coordination</u> <u>procedure could not be successfully</u> <u>completed</u> for the assignments being notified



RESUBMISSIONS(2)

Unfavourable finding under No. 11.32

•No. 11.46 is applicable

•The resubmission will retain the original date of submission, unless the resubmission is received more than 6 months after the date of which the original submission was returned

 In other words, important to resubmit within 6 months to retain the original date of submission



RESUBMISSIONS(1)

Unfavourable finding under No. 11.31 •No. 11.46 is not applicable •Will have a new date of receipt upon resubmission





RESUBMISSIONS(3)

Unfavourable finding under Nos. 11.32A & 11.33

•Possible to be resubmitted under No. 11.41

•Assignment shall be recorded on a provisional basis in the MIFR

•Can be changed from provisional to definitive if the Bureau is informed that the <u>new assignment</u> <u>has been in use, together with the assignment</u> <u>which was the basis for the unfavourable</u> <u>finding, for at least four months without any</u> <u>complaint of harmful interference</u>



ASSIGNMENT LEVELS(1)

•Finding is established at assignment levels

•Different frequency assignments may be notified at different times



ASSIGNMENT LEVELS(2)





PUBLICATION OF FINDINGS

Favourable Findings

•Published in Part II-S of the BR-IFIC CD-ROM

Unfavourable findings

•Published in Part III-S of the BR-IFIC CD-ROM

•BRIFIC publications also available on the ITU website

www.itu.int → Radiocommunication(ITU-R) → Space Services → BR IFIC →BR IFIC data



Definition in the BR IFIC

•Part II-S - Findings adopted concerning new frequency assignments or modifications to existing frequency assignments resulting in the recording of the frequency assignment in the <u>Master Register;</u>

•Part III-S - Unfavourable Findings adopted concerning new frequency assignments or modifications to existing frequency assignments <u>resulting in the return of the notice to the notifying</u> <u>administration</u>.



Snapshot of BR IFIC



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Preface to BR IFIC

 Refer to Tables in PREFACE to understand findings

http://www.itu.int/ITU-R/space/preface/index.html

- Table 11 (A, B, C related to Col.A5/A6)
- Table 13 (A1,A2, A3, B1, B2, B3, C) Related to Cols: 13A, 13B, 13C



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					SECTION IV - Table 11B: Symbols used for coordination and agreement status				•
Pages Bookmarks				Symbol used in provision column	Description				•
Pages				V/11.31.1	The use of this frequency assignment is subject to the application of the procedure of No. 9.21. In the process of application of this procedure the administration of the country designated by the symbol inserted in the "adm" column of the coordination table A5/A6 has formally objected to the proposed use. The Bureau has therefore concluded that the application of the procedure of No. 9.21 was not successfully completed with the administration concerned. A favourable Finding (13A1) was nevertheless formulated on the understanding that no harmful interference shall be caused to the services of or protection claimed from the administration concerned.				
				V/11.32A	The coordination required under Nos.9.7, 9.7A, 9.7B, 9.11, 9.12, 9.12A, 9.13 or 9.14 of the space station assignment has not been effected with the administration of the country designated by the symbol inserted in the "adm" column of the coordination table A5/A6 (unfavourable finding with respect to No. 11.32). Nevertheless, the Bureau's finding for this assignment with respect to No. 11.32A is favourable.				
				V/11.33	The coordination required under No.9.15, 9.16, 9.17, 9.17A or 9.18 of the space station assignment has not been effected with the administration of the country designated by the symbol inserted in the "adm" column of the coordination table $A5/A6$ (unfavourable finding with respect to No. 11.32). Nevertheless, the Bureau's finding for this assignment with respect to No. 11.33 is favourable.				
				11.41	This assignment has not been coordinated with the assignments of the administration of the country designated by the symbol inserted in the "adm" column of the coordination table A5/A6. This assignment was nevertheless recorded in the MIFR subject to the application of the procedure of No. 11.41 . The assignments which are basis of the unfavourable findings are indicated in the Remark column.				
6				AP30	This assignment is in conformity with AP30 Plans or R1 and R3 List.				
Attachments				AP30A	This assignment is in conformity with AP30A Plans or R1 and R3 List.				
Attacl				AP30B	This assignment is in conformity with AP30B Plan.				
				X/AP30	This assignment is not in conformity with AP30 Plans or R1 and R3 List.				
etts				X/AP30A	This assignment is not in conformity with AP30A Plans or R1 and R3 List.				
Comments				X/AP30B	This assignment is not in conformity with AP30B Plan.				
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Preface to BR IFIC

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							SECTION IV - Table 11B: Symbols used for coordination and agreement status Table 11B.2 Symbols in agreement status column currently in use			
						Symbol used in agreement status column	Description			-
						о	Coordination or agreement has been obtained, or this assignment is inconformity with Plans/R1 and R3 Lists			
						х	Required Coordination or agreement has not been obtained, or this assignment is not inconformity with Plans/R1 and R3 Lists			
						v	Required Coordination or agreement has not been obtained but a favourable finding is given			
Comments Attachments							Table 11B.3 Symbols in provision column used up to 31.12.1998			
Comments						Symbol used in provision column	Description			
12222						N/RR1060 N/RR1107	The administration responsible for this entry asked the Bureau to seek coordination under the provisions of the Radio Regulations indicated in this remark with the administration of the country whose name is designated by the symbol in the "adm" column of the			~
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Administrative Due Diligence (Resolution 49)

• Resolution 49: to address the problem of reservation of orbit and spectrum capacity without actual use (Res. 18 of Kyoto Plenipotentiary)

• Applies from 22.11.1997 to any satellite network in the FSS, MSS, BSS that is subject to coordination under 9.7, 9.11, 9.12, 9.12A and 9.13 and Resolution 33 (Rev.WRC-03)



Administrative Due Diligence (Resolution 49)

• Applies to submissions under Article 4 of Appendices 30 and 30A

• Applies to submissions under Article 6 of Appendix 30B (Rev. WRC-07) received on or after 17 November 2007(with the exception of new Member States seeking the acquisition of their respective national allotments for inclusion in the AP30B Plan)



Administrative Due Diligence (Resolution 49)

• Six months before expiry of the notified period of bringing into use (7 years for non planned services and 8 years for planned services), the BR sends a reminder. The complete due diligence shall be published by the Bureau in the BR IFIC

• If the complete due diligence information is not received within the specified time limit, the network shall cancelled from the Master Register or Appendices 30/30A/30B Lists (paragraph 6 of Res 49)



Information required:

Annex 2 to Resolution 49

A.Identity of the satellite network

B. Spacecraft manufacturer

C. Launch services provider



Information required:

A.Identity of the satellite network

a) Identity of the satellite network
b) Name of the administration
c) Country symbol
d) Reference to the API special section, to
the modification of AP30/30B, to the information
of Article 6 of AP30B(Rev.WRC-07)



Information required:

e) reference to the CR/C special section (not applicable for AP30/30A/30B) f) Frequency band(s) g) Name of the operator h) Name of the satellite i) Orbital characteristics



Information required:

- **B.** Spacecraft manufacturer
- a) Name of the spacecraft manufacturer
 b) Date of execution of the contract
 c) Contractual "delivery window"
 d) Number of satellites procured



Information required:

C. Launch services provider

a) Name of the launch vehicle providerb) Date of execution of the contractc) Anticipated launch or in-orbit delivery window

d) Name of the launch vehicle

e) Name and location of the launch facility



QUESTIONS ?

