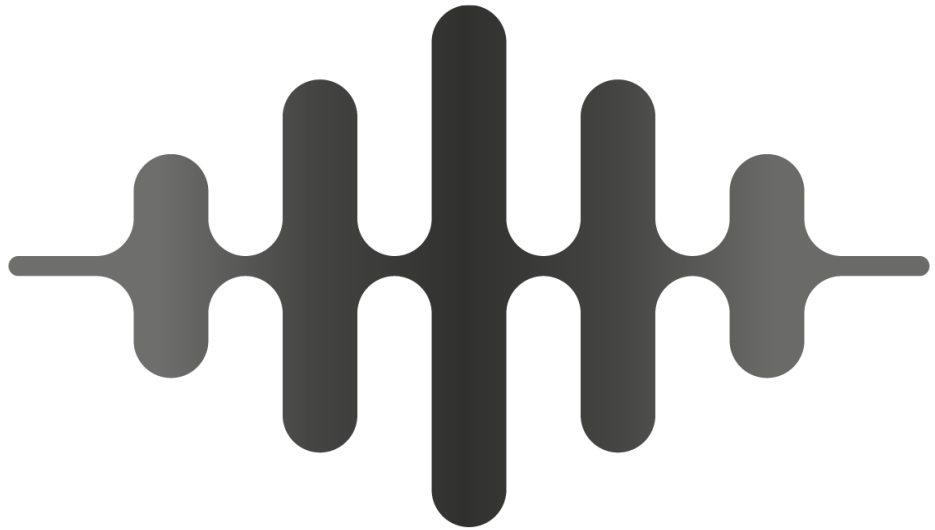


ITUWRS GENEVA2024

2–6 December 2024
Geneva, Switzerland

Submission and Receivability of GSO networks – Coordination and Notification

Akim FALOUDINE (BR/SSD/SPR)
akim.faloudine@itu.int

2-6 December 2024, Geneva, Switzerland

1) ITU Regulatory – Registration Procedures – Receivability
2) Mandatory Data Items in accordance with Appendix 4 RR
3) Graphical Database
4) Submission of the required databases

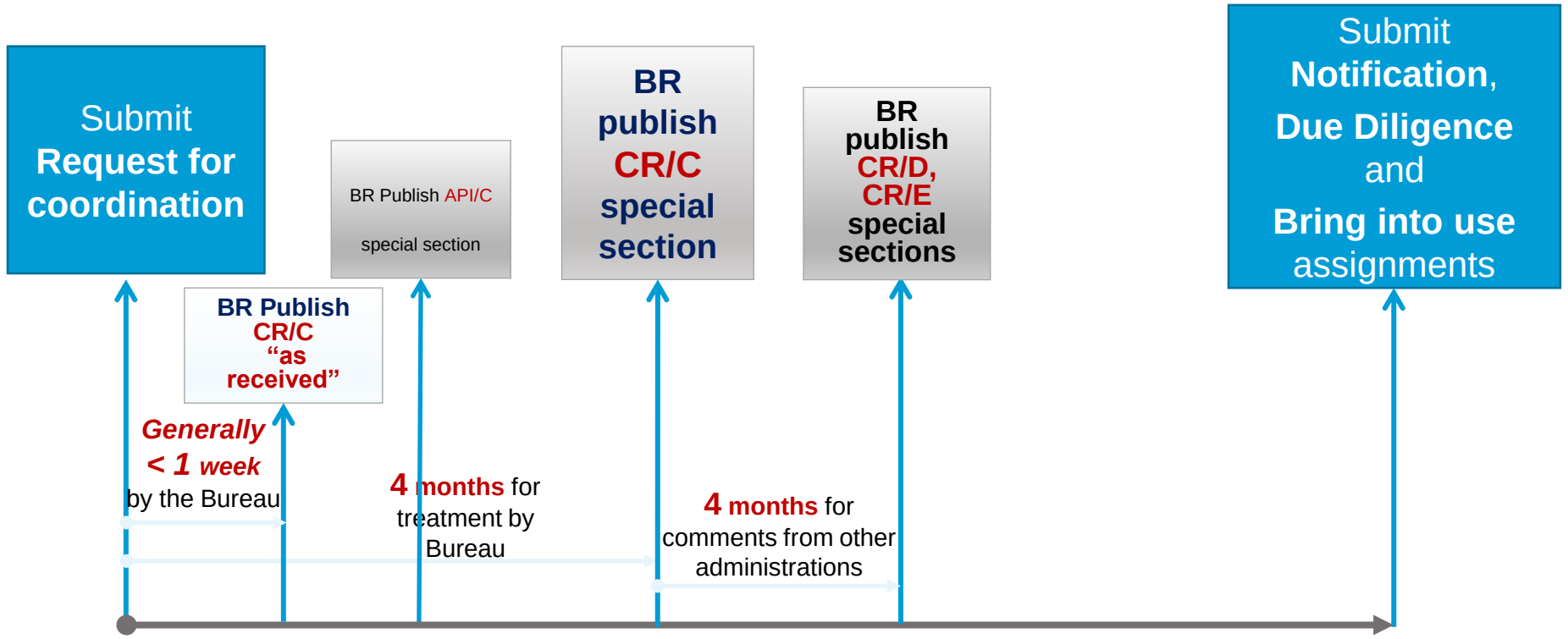
Table of Contents

First come, First served !

What should you do
to make your notice for satellite networks
receivable

How to obtain promptly
a **formal date of receipt**
for your satellite network

ITU process for satellite networks subject to coordination



MAXIMUM 7 YEARS !

Submission and Receivability of Notices

Notices contain *mandatory* information contained

in Annex 2 of Appendix 4 of RR

- ✓ SNS data
- ✓ Graphical data (GIMS)

Submission of information in electronic format

- ✓ E-submissions Receivability §2 (RoP 2021 Rev.2)

Establishment of Date of Receipt (RoP *Receivability* §3)

- ✓ Completeness and Correctness
  - BRSIS SpaceVal Fatal Errors are the main guideline for completeness checks
  - BRSIS SpaceVal Warnings point to possible correctness issues
- ✓ Dealing with missing information
  - Correspondence exchanges

Rules concerning Receivability

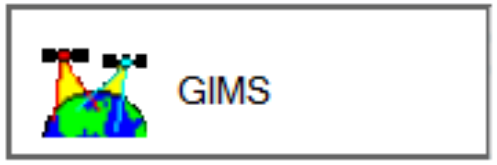
Appendix 4

Notice Database

Cross validation

Diagram Database

Use the latest BR software



Check completeness and **correctness** to **establish a formal date of receipt**

CR/464 only GIMS mdb format shall be receivable under **RES 55** (WRC-19).

Establishment of a formal date of receipt of info

In order to establish a formal date of receipt for the purpose of treatment of the submissions, the Bureau shall examine inter alia the completeness and correctness of the information submitted by administrations.

Where a notice received by the Bureau does not contain all of the mandatory information as defined in Annex 2 of Appendix 4 or appropriate reason for any omissions, the Bureau shall regard the notice as incomplete. 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 formal date of receipt will not be established until the missing information is received. The formal date of receipt will be the date of receipt of the missing information.

Rules concerning Receivability(3.5-3.8 of RoP)

3.5 After processing the Appendix **4** Form of Notice as set out in § 3.3, if the Bureau finds that further clarification is required concerning the correctness of the mandatory data submitted, it shall request the administration responsible for the station or network to provide the clarification within 30 days, otherwise it shall establish the formal date of receipt as that recorded in accordance with § 2 and § 3.2 above.

3.6 If the information or clarification is provided within that period of 30 days (counted from the date of the dispatch of Bureau's message), the date of receipt established by the Bureau in accordance with § 2 and § 3.2 above will be considered as the formal date of receipt for the purpose of any subsequent processing of the notice.

3.7 Nevertheless, for replies received within the above period of 30 days, a new formal date of receipt is established in those cases (or for the concerned part of the station or network) where the information submitted subsequently is outside the scope and beyond the objective of the Bureau's enquiry pursuant to § 3.5 above, if the new or modified data has impact on the regulatory and technical examination, irrespective of whether the newly provided information adds new affected administrations or not. See also the Rules of Procedure relating to provision No. **9.27**.

3.8 If the information or clarification is not provided within the above period of 30 days, the submission shall be considered incomplete and the Bureau will establish no formal date of receipt. A new formal date of receipt will be established when the complete information is received.

Table of Contents

Appendix 4 of the Radio Regulations

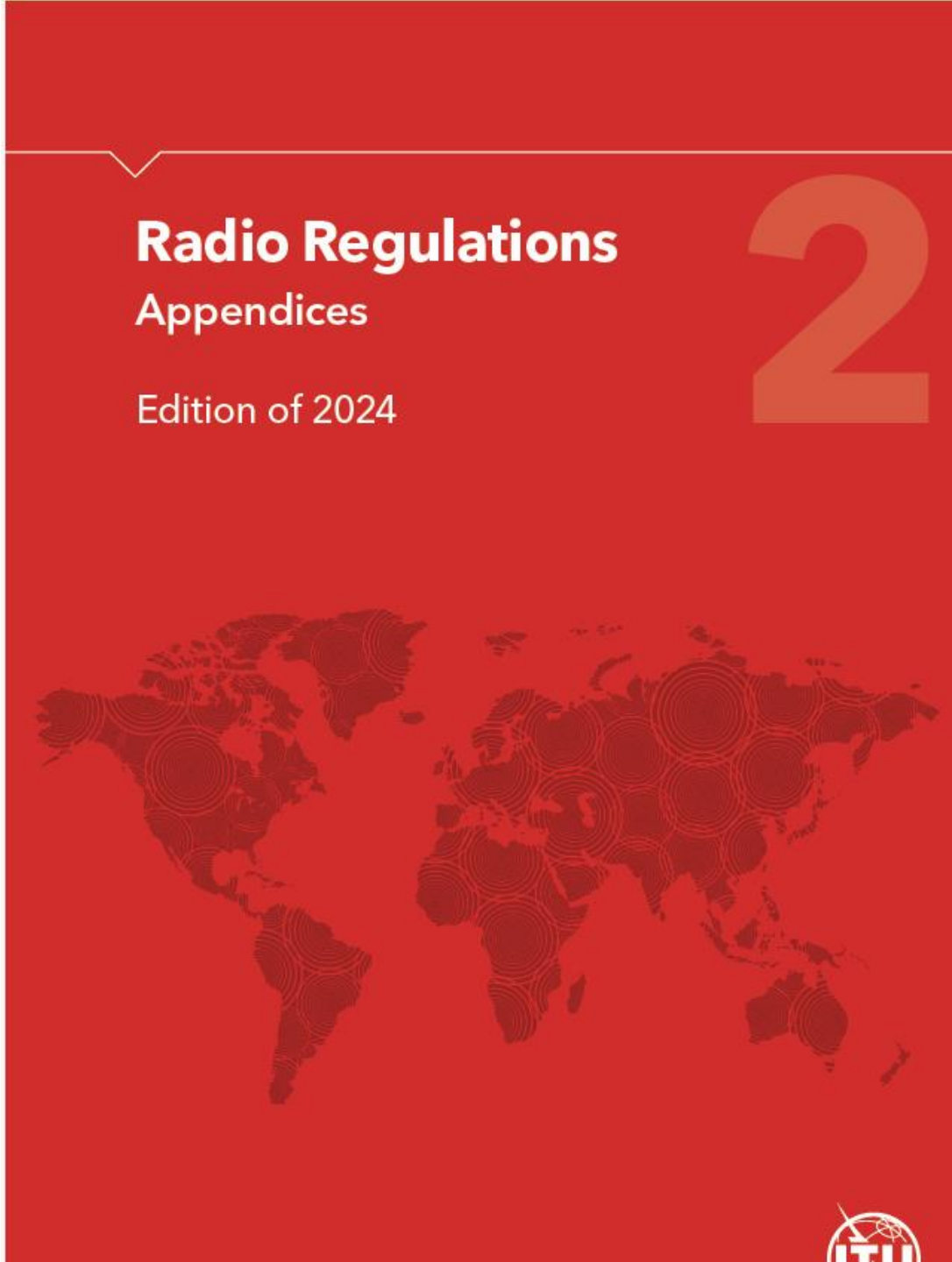
ANNEX-2 - Characteristics of satellite networks, earth stations or radio astronomy stations

TABLE A – GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK, EARTH STATION OR RADIO ASTRONOMY STATION

TABLE B – CHARACTERISTICS TO BE PROVIDED FOR EACH SATELLITE ANTENNA BEAM OR EACH EARTH STATION OR RADIO ASTRONOMY ANTENNA

TABLE C – CHARACTERISTICS TO BE PROVIDED FOR EACH GROUP OF FREQUENCY ASSIGNMENTS FOR A SATELLITE ANTENNA BEAM OR AN EARTH STATION OR RADIO ASTRONOMY ANTENNA

TABLE D - OVERALL LINK CHARACTERISTICS



Appendix 4 of the Radio Regulations –Ap4 items to be submitted for coordination/notification requests

Table of characteristics to be submitted for space and radio astronomy services
(Rev.WRC-12)

TABLE A

GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK OR SYSTEM, EARTH STATION OR RADIO ASTRONOMY STATION (Rev.WRC-19)

Items in Appendix	*A - GENERAL CHARACTERISTICS OF THE SATELLITE NETWORK OR SYSTEM, EARTH STATION OR RADIO ASTRONOMY STATION*	Advance publication of a geostationary-satellite network	Advance publication of a non-geostationary-satellite network or system subject to coordination under Section II of Article 9	Advance publication of a non-geostationary-satellite network or system not subject to coordination under Section II of Article 9	Notification or coordination of a geostationary-satellite network (including space operation functions under Article 2A of Appendices 30 or 30A)	Notification or coordination of a non-geostationary-satellite network or system	Notification or coordination of an earth station (including notification under Appendices 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Articles 4 and 5)	Notice for a satellite network (feeder-link) under Appendix 30A (Articles 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Articles 6 and 8)	Items in Appendix
A.1	**IDENTITY OF THE SATELLITE NETWORK OR SYSTEM, EARTH STATION OR RADIOASTRONOMY STATION**										A.1
A.1.a	the identity of the satellite network or system	X	X	X	X	X		X	X	X	A.1.a
A.1.b	the beam identification In the case of Appendix **30** or **30A**, required only for modification, suppression or notification of Plan assignments In the case of Appendix **30B**, required only for a network derived from the Allotment Plan							+	+	+	A.1.b
A.1.e	**Identity of the earth station or radio astronomy station:**										A.1.e
A.1.e.1	the type of earth station (specific or typical)						X				A.1.e.1
A.1.e.2	the name of the station						X				A.1.e.2
A.1.e.3	**For a specific earth station or radio astronomy station:**										A.1.e.3
A.1.e.3.a	the country or geographical area in which the station is located, using the symbols from the Preface						X				A.1.e.3.a
							X				A.1.e.3.b
											A.1.f
		X	X	X	X	X	X	X	X	X	A.1.f.1
		+	+	+	+	+		+	+	+	A.1.f.2
		+	+	+	+	+		+	+	+	A.1.f.3
				X		+					A.1.g
											A.1.g.1
											A.1.g.2

X	Mandatory information
+	Mandatory under the conditions specified in Column 2
O	Optional information
C	Mandatory if used as a basis to effect coordination with another administration
	The data item is not applicable to the corresponding notice

Space Operation Service

Space operation: ET ≠ EK, ER, ED

RoP No. 1.23

In the No. **11.31** examinations, notices concerned with space operation **functions** will be considered in conformity with the Table of Frequency Allocations (favourable Finding) in the case where the assigned frequency (and the assigned frequency band) lies in a frequency band allocated to the:

- Space operation **service**, or
- The main service in which the space station is operating (e.g. FSS, BSS, MSS).

In the case where the assigned frequency concerning space operation **functions**, falls in a frequency band allocated to a service in which the space station has no operating **function** , finding will be unfavourable under No. **11.31**

Advice: Please include ET (space operation) as class of station if the band is allocated to Space operation service otherwise indicate ED (space telecommand), ER (space telemetry) or EK (space tracking)

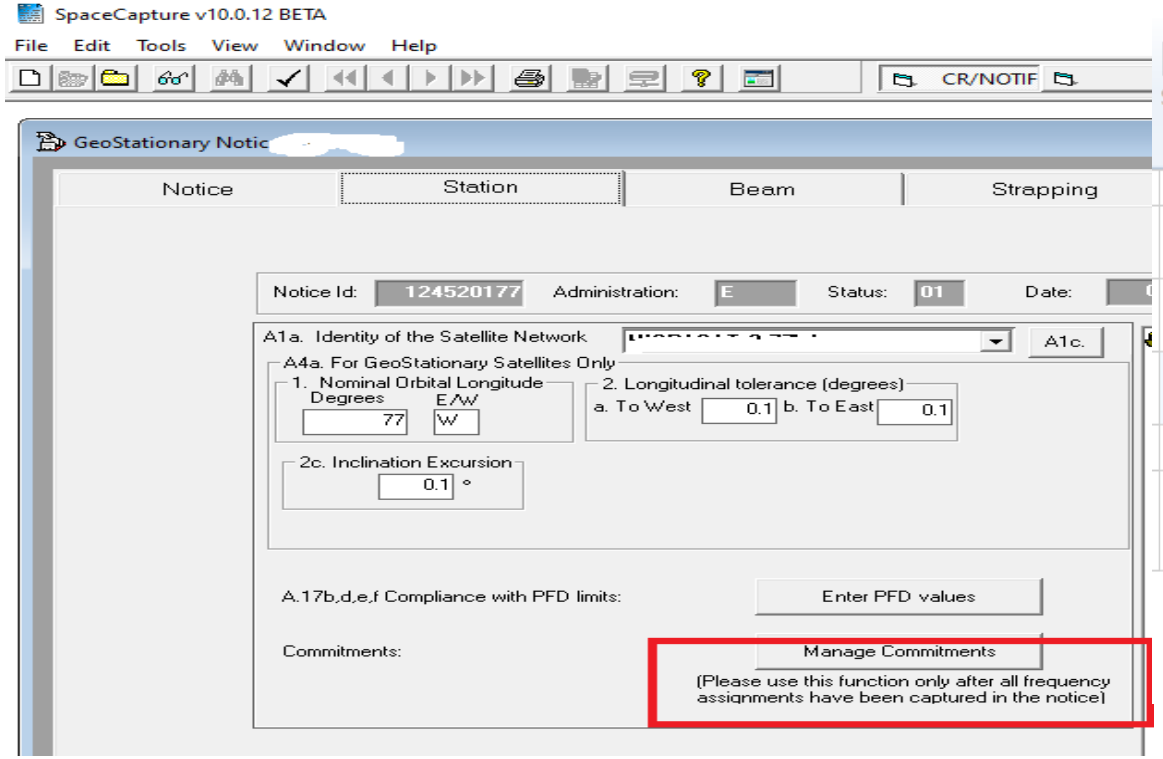
submission of commitments

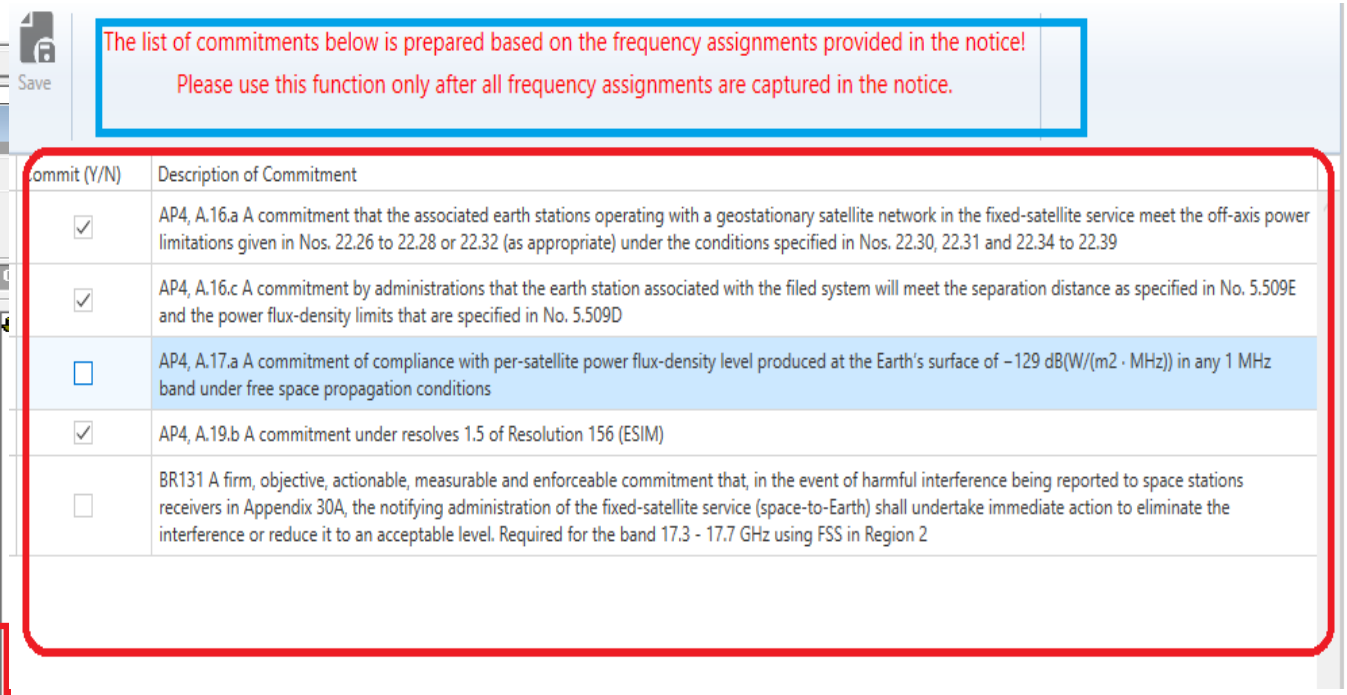
Please remember to provide the commitments required by the Radio Regulations (RR), many of which were introduced by WRC-23. Please find below some of the commitments

AP4	DESCRIPTION	Attachment number	CONDITIONS							
	Text		Ntc_type	ntf_rsn	direction	band		class of station		Other
						freq min	freq max	Space station	Earth station	
A.16.a	a commitment that the associated earth stations operating with a geostationary satellite network in the fixed-satellite service meet the off-axis power limitations given in Nos. **22.26** to **22.28** or **22.32** (as appropriate) under the conditions specified in Nos. **22.30**, **22.31** and **22.34** to **22.39**		G	C, N		12750 13750 29500	13250 14500 30000	EC		
A.16.c	commitment by administrations that the earth station associated with the filed system will meet the separation distance as specified in No. 5.509E and the power flux-density limits that are specified in No. 5.509D		G	C, N	R	14500	14800	EC		f_nfd_lnk = Y (RES163/164)
A.17.a	a commitment of compliance with per-satellite power flux-density level produced at the Earth's surface of −129 dB(W/(m² · MHz)) in any 1 MHz band under free space propagation conditions		G, N	C, N		1164	1215	EN		
A.17.g.2	a commitment to observe the limit on power flux-density (pfd) produced at the site of a radio astronomy station in the frequency band 15.35-15.4 GHz, as defined in resolves 1.2 of Resolution 678 (WRC-23)		G	C, N		14800	15350	EH		
A.17.h	a commitment of compliance with the per-satellite power flux-density level produced at the Earth's surface of −170 dB(W/(m² · 14 kHz)) in any 14 kHz band in the frequency band 137-138 MHz under free-space propagation conditions		G,N	C, N		117.975	137	E5, EJ, EI		
A.18.a	commitment that the characteristics of the aircraft earth station (AES) in the aeronautical mobile-satellite service are within the characteristics of the specific and/or typical earth station published by the Bureau for the space station to which the AES is associated		G, N	C, N		14000	14500	EC	TJ	
A.19.b	a commitment in accordance with *resolves* 1.5 of Resolution **156** (**Rev.WRC-23**) that the administration responsible for the use of the assignment shall implement *resolves* 1.4 of Resolution **156** (**Rev.WRC-23**)		G	C, N		19700 29500	20200 30000	EC	UF	

submission of commitments

Please remember to provide the commitments required by the Radio Regulations (RR), many of which were introduced by WRC-23. Kindly use SpaceCap V10 for this purpose.





RES 163/164 in 14.5-14.8 GHz (GSO FSS)

- Feeder link for BSS under No. **5.510**
- Not for feeder link for BSS
  - ✓ Resolution **163** (**14.5**-**14.75** GHz) – specific countries in Regions 1 and 2
    Resolution **164** (**14.5**-**14.8** GHz) – Specific countries in Region 3

Use GIMs software to capture these countries as a service region with the symbols Res.163 or Res.164

- ✓ Specific data requirements when used under Res **163/164**:
  - **A16c commitment** must be provided
    - *will meet the separation distance of at least 500km from the borders of other countries as specified in No. **5.509E** and the power flux-density limits (-151.5dB) that are specified in No. **5.509D***
  - **Antenna diameter** must be provided
    - *Minimum 6m (No.**5.509C**)*

WRC-15

Earth Station Antenna Diameter

Associated earth station antenna diameter in meters (AP4 Annex 2 No. C.10.d.7)

- required for fixed-satellite service (EC) operating in the frequency bands
  - ✓ 13.75-14 GHz ~min 1.2m (GSO) or ~min 4.5m(NGSO)
  - ✓ 14.5-14.8 GHz (not for feeder link for the BSS under Res **163/164**) ~min 6m
  - ✓ 24.65-25.25 GHz (Region 1) ~min 4.5m
  - ✓ 24.65-24.75 GHz (Region 3) ~min 4.5m
  - ✓ **51.4-52.4 GHz (WRC-19)** ~min 2.4m

- required for maritime mobile-satellite service (EG) operating in the frequency band 14-14.5 GHz ~ See Res **902**

- Take note of the restrictions on earth station diameters in the **footnote** to the **Table of Frequency Allocations**

RoP relating to No. 21.16 – PFD limits for steerable beams

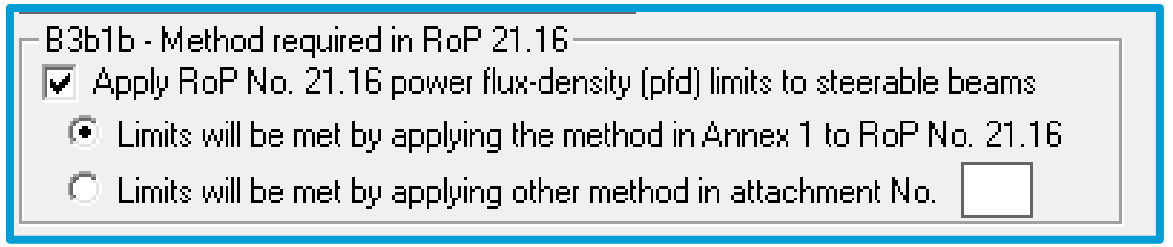
RoP relating to **No.21.16** requires the following for **steerable** beams:

- ✓ Administration should **state** that the applicable PFD limits will be met by applying **a method** with descriptions
  - One possible example of such a method is described in the Annex to the Rule relating to No. **21.16**.
  - If other methods are used, description of the method should be provided as an attachment
  - Administrations may also decide not to use the method required in RoP

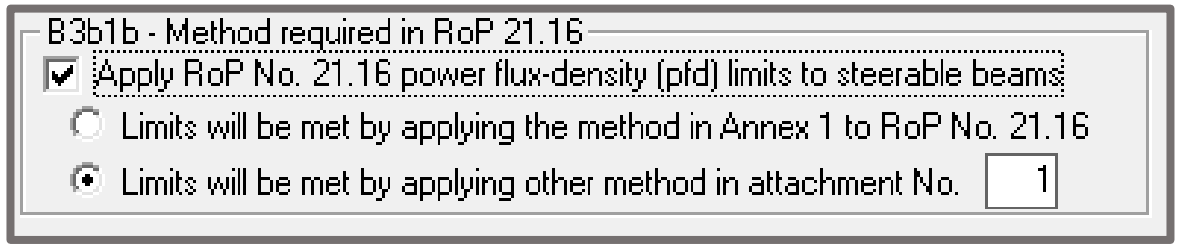
How to submit information related to No.21.16 in Space

3 Possibilities

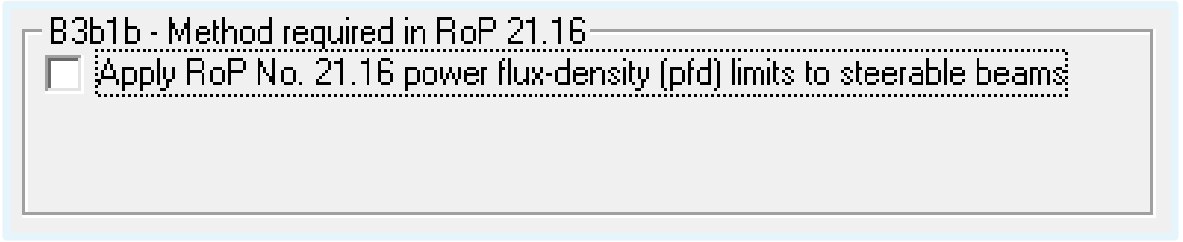
1) Frequency band subject to No. **21.16** -Rules of Procedure to be applied -Annex 1 method will be used to meet limits



2) Frequency band subject to No. **21.16** -Rules of Procedure to be applied –Method in attachment to meet the limits



3) Frequency band subject to No. **21.16-** Do not wish for Rules of Procedure to be applied



RoP relating to Maximum power density levels below -100 dBW/Hz (C.8.a.2/C8.b.2)

The Radio Regulation Board decided, at its 97th Meeting (11-19 November 2024) that:

-frequency assignments to GSO satellite networks with power spectral density levels below -100 dBW/Hz are not receivable

-frequency assignments to non-GSO satellite systems or networks with power spectral density levels below -100 dBW/Hz are only receivable if clarifications are provided to the Bureau on the use of very low power spectral density values (e.g. the mode of operation, the use of spread spectrum, etc.) as well as example link budget calculations demonstrating that the submitted required C/N ratio objective is met with sufficient interference margin.

Some Tips:

Inclination ≤ 15°

- **No. 1.185** + Article **9** Footnote **A.9.6A**

Station keeping / Tolerance of space stations

≤ 0.1° for FSS / BSS

- **No. 22.6 – No.22.10** + ROP relating to **22.10**

Station keeping / Tolerance of space stations

≤ 0.5° for other services

- **No. 22.11 – No.22.18** + ROP relating to **22.14**

Table of Contents

Graphical Data / DIAGRAMS IN GIMS MDB

Diagram Database

CR/464 (2020) only GIMS mdb format shall be receivable under RES 55.

Main Graphical Data for CRC (GSO) in Gims

Antenna Gain Contour

Service Area

Antenna Gain towards GSO orbit (AG-GSO)

Antenna Gain Contour

AP4 Annex 2 No. **B.3.b.1**

at least for **-2, -4, -6, -10 and -20** dB and **at 10 dB intervals thereafter**, as necessary, relative to the maximum antenna gain, when any of these contours is located either totally or partially anywhere within the limit of visibility of the Earth from the given geostationary satellite

For steerable beam (No.**1.191**), if the effective boresight area is less than the global service area, the contours are the result of moving the boresight of the steerable beam around

… …

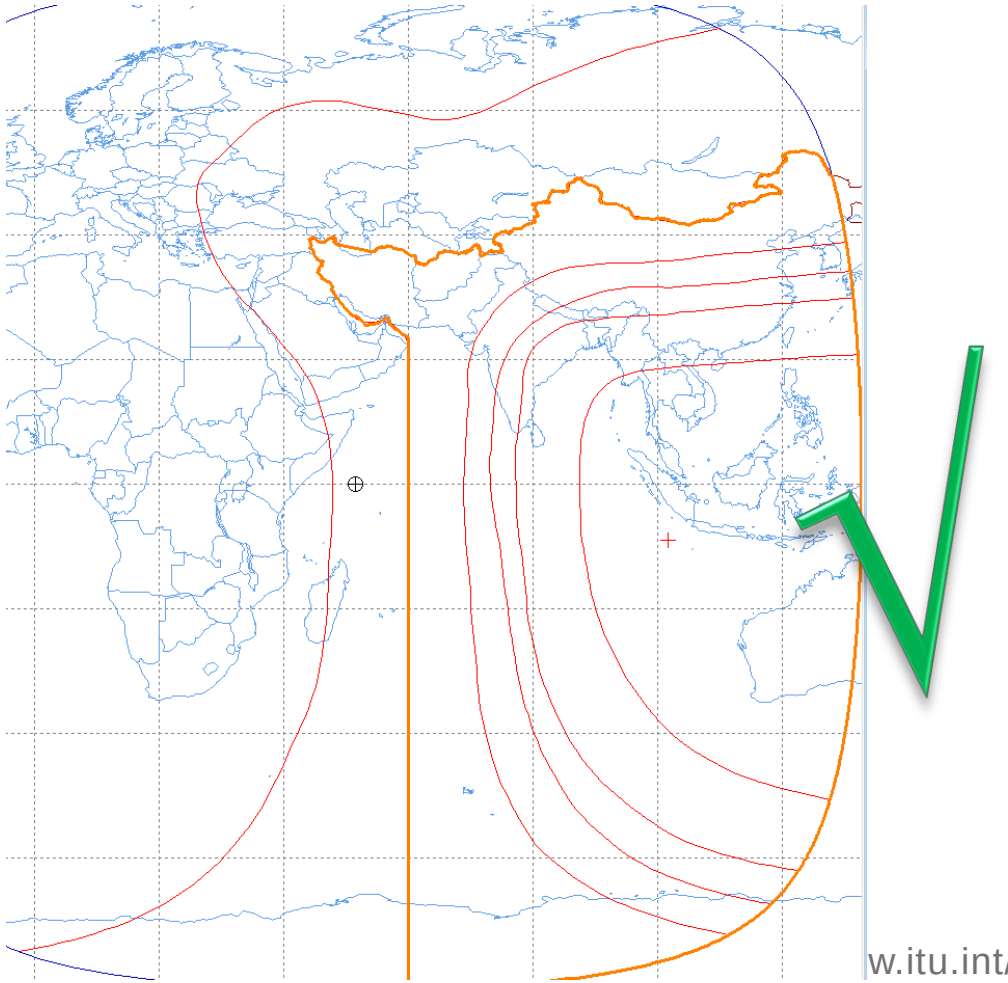
shall also include the **0 dB relative gain isoline**

- For gain contours, please check manually.

Antenna Gain Contour

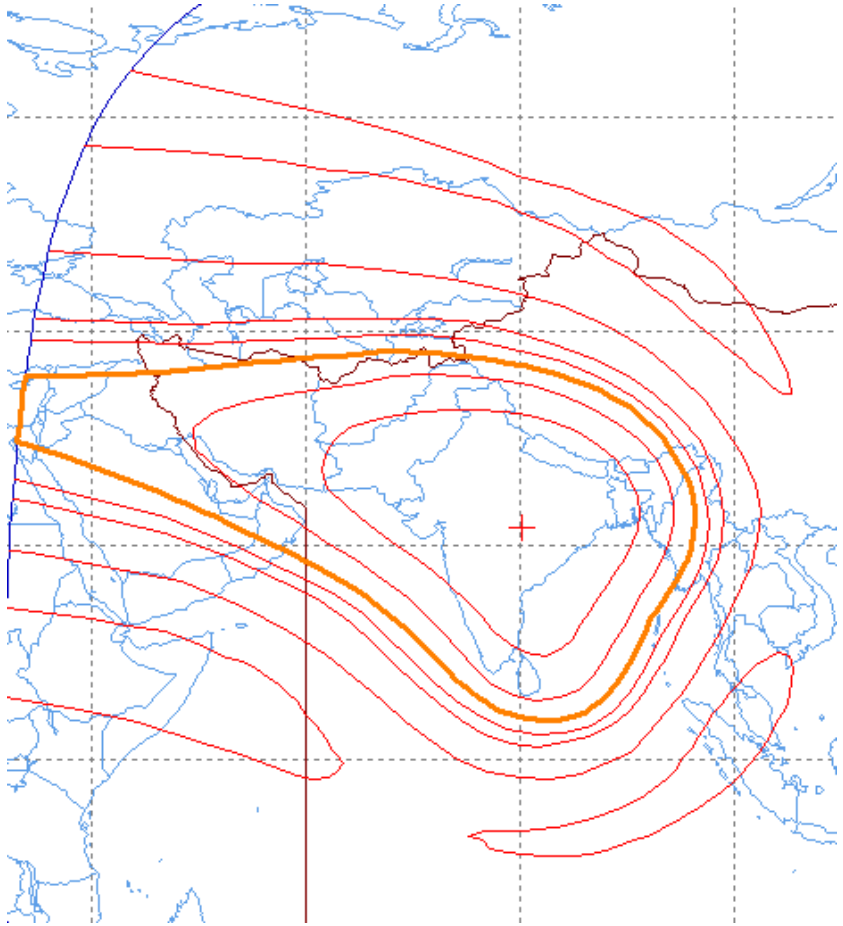
AP4 Annex 2 No. B.3.b.1

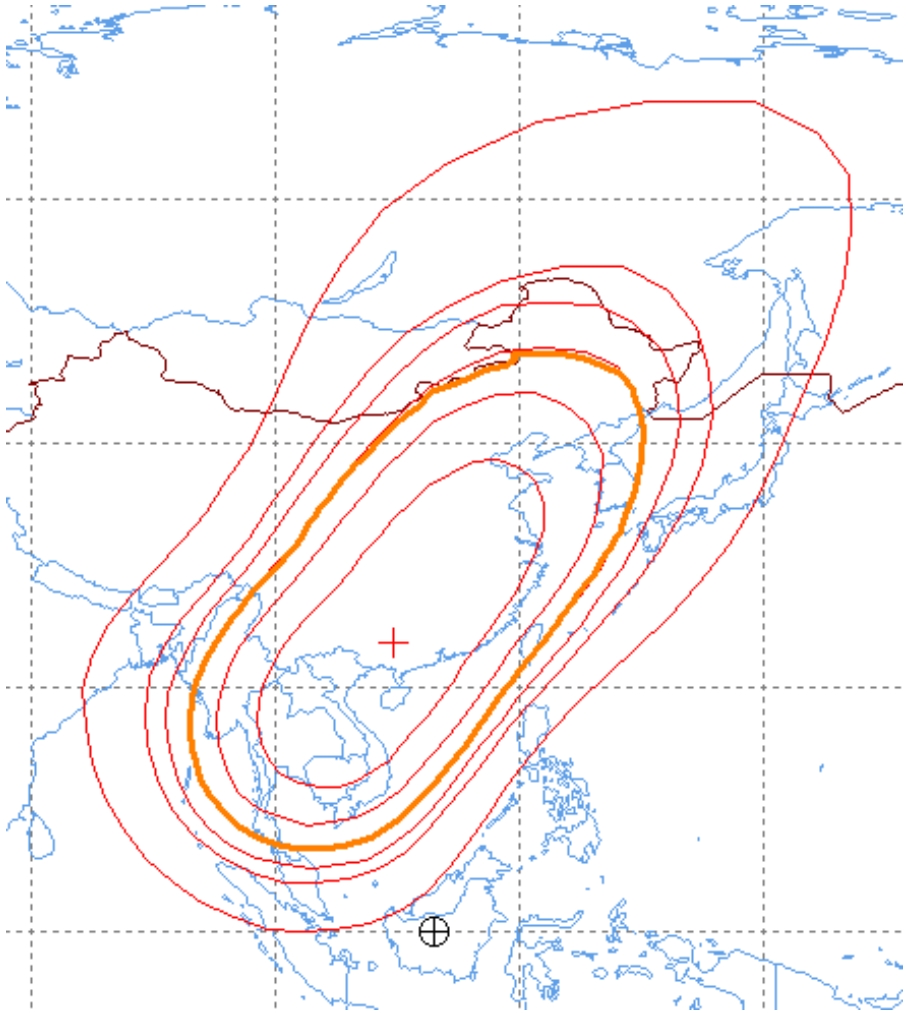
Note ---
"*administrations should, to the extent practicable,* ***align the areas*** *the satellite steerable beams could cover with the service area of their networks with due regard* ***to their service objectives.***"



Antenna Gain Contour

AP4 Annex 2 No. B.3.b.1





Antenna Gain Contour

AP4 Annex 2 No. **B.3.b.1**

The Bureau would like to request that your Administration **consider providing revised effective gain contour diagrams** for these beams, **more closely aligned with the service area concerned**, which may result in reduced coordination requirement for your network as well as improve the efficiency of the utilization of spectrum and orbit resources.

Service Area

It is recommended to use GIMS software to capture the service area

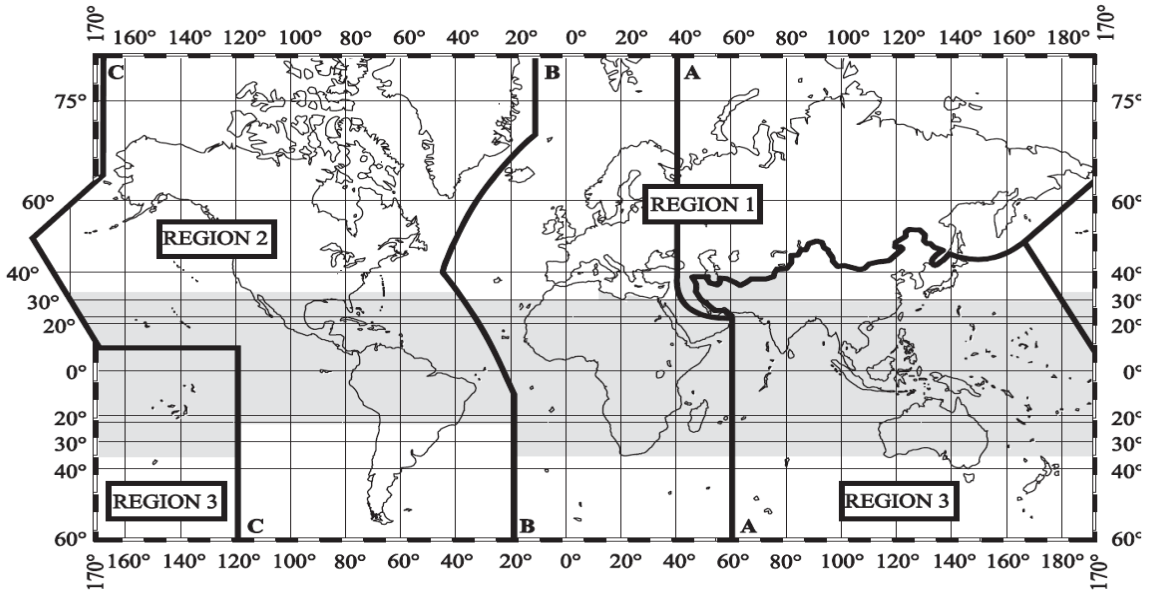
Regional limitations under Article 5

- If service area submitted is **larger than** what is allowed for under **Article 5**
- BR will **split** the service area,
  to the part that has an allocation, and another part that has no allocation.
- Administrations are encouraged to **exclude** regions or countries which are not allocated for the frequency bands and services concerned under **Art.5.**

Service Area
Example of limitation of SA

Letter will be sent by the Bureau to propose to limit the Service aera

Allocation to services		
Region 1	**Region 2**	**Region 3**
24.75-25.25 FIXED FIXED-SATELLITE (Earth-to-space) 5.532B MOBILE except aeronautical mobile 5.338A 5.532AB	24.75-25.25 FIXED 5.532AA FIXED-SATELLITE (Earth-to-space) 5.535 MOBILE except aeronautical mobile 5.338A 5.532AB	24.75-25.25 FIXED FIXED-SATELLITE (Earth-to-space) 5.535 MOBILE 5.338A 5.532AB
25.25-25.5	FIXED 5.534A INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB Standard frequency and time signal-satellite (Earth-to-space)	
25.5-27	EARTH EXPLORATION-SATELLITE (space-to-Earth) 5.536B FIXED 5.534A INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space) 5.536A	
27-27.5 FIXED INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB	27-27.5 FIXED 5.534A FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 5.536 5.537 MOBILE 5.338A 5.532AB	
27.5-28.5	FIXED 5.537A FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.539 MOBILE 5.538 5.540	



With respect to receiving beam NKA1UP, group ID 1758, you have submitted the assigned frequency 27.75 GHz with an assigned bandwidth of 1 GHz, in the fixed-satellite service, with a service area that covers the visible portions of Regions 1 and 3. This frequency assignment falls partially within the band 27.0 – 27.5 GHz which is available for use only in Regions 2 and 3, there being no allocation in the Earth-to-space direction in the fixed-satellite service in Region 1. The Bureau proposes to limit the service area for this frequency assignment to the visible portion of Region 3, and will continue treatment of your coordination request on this basis unless you advise to the contrary within 30 days from the date of this communication.

Antenna Gain towards GSO orbit (AG-GSO)

Requirement for AG-GSO diagrams
AP4 Annex 2 No. B.3.e

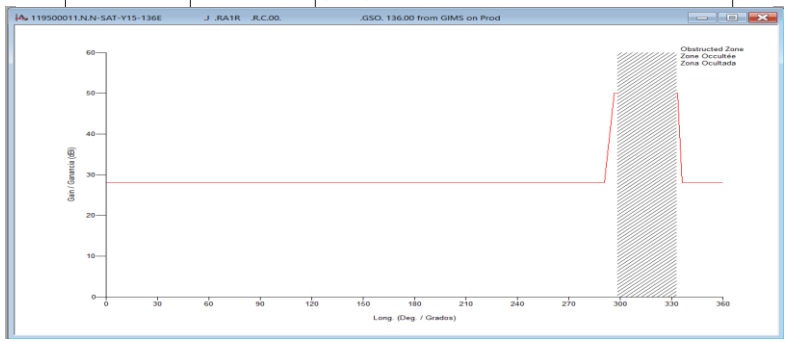
– if the space station is operating in a band allocated **both** in the **Earth-to-space** direction and in the **space-to-Earth** direction

– Check **Appendix 4 of the validation rules** for reference

– Validate using the BRSIS Validation software with **Cross-Validation** feature

Appendix 4 : list of frequency bands with bi-directional utilization

Freq. from (MHz)	Freq. To (MHz)	Remarks
28.0	29.7	AMATEUR-SATELLITE
30.005	30.010	SPACE OPERATION (satellite identification) SPACE RESEARCH
39.986	40.020	Space Research
40.980	41.015	Space Research
144.0	146.0	AMATEUR-SATELLITE
149.900	150.050	RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space) 5.224 B - allocation until 01/01/2015
235.000	322.000	Mobile-satellite 5.254
335.40	399.90	Mobile-satellite 5.254
399.90	400.05	RADIONAVIGATION-SATELLITE LAND MOBILE-SATELLITE (Earth-to-space)
400.05	400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1)



- By running **BRSIS Validation** with **Cross-val option**, if the diagram is required but missing in the notice, **fatal errors** will be reported

Graphical Data concerning Antenna Radiation Pattern

❑ The **co-polar** antenna radiation pattern (item **B.3.c.1** of Appendix **4**) for the space station antenna

- ❖ In the case of geostationary space stations required **only** for an antenna radiation beam that is directed towards another satellite

❑ The measured **co-polar** antenna radiation pattern or the **co-polar** reference radiation pattern for the associated Earth stations (item **C.10.d.5.a** of Appendix **4**) **have to be provided either with**

- ❖ **Pattern ids** in the notice database or
- ❖ **Equations/tables** describing the pattern
- ❖ diagrams in the **Gims database**

- Diagrams must be imported into a Gims database and marked with the correct header elements
- Please follow the guide on how to capture the diagrams in Gims as shown in the website below

https://www.itu.int/ITU-R/go/space-AdditionalDataUnderAP4/en

For non-standard Antenna Radiation Patterns

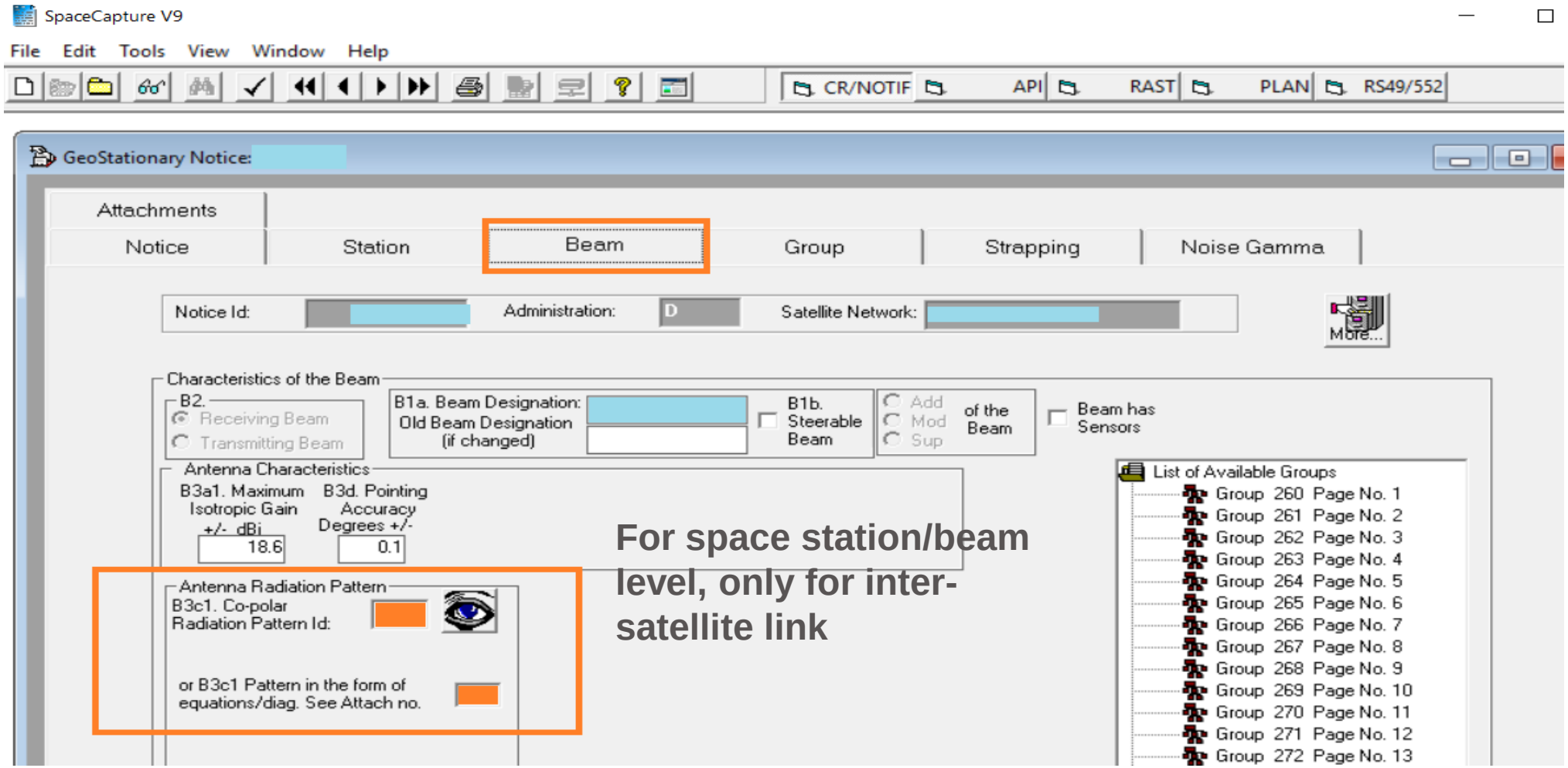
Co-polar Gain values must be provided for **all off-axis angles**

(**0 to ±180°**)

Equations/tables describing the pattern should be provided: the Bureau will assign new pattern IDs in the APL

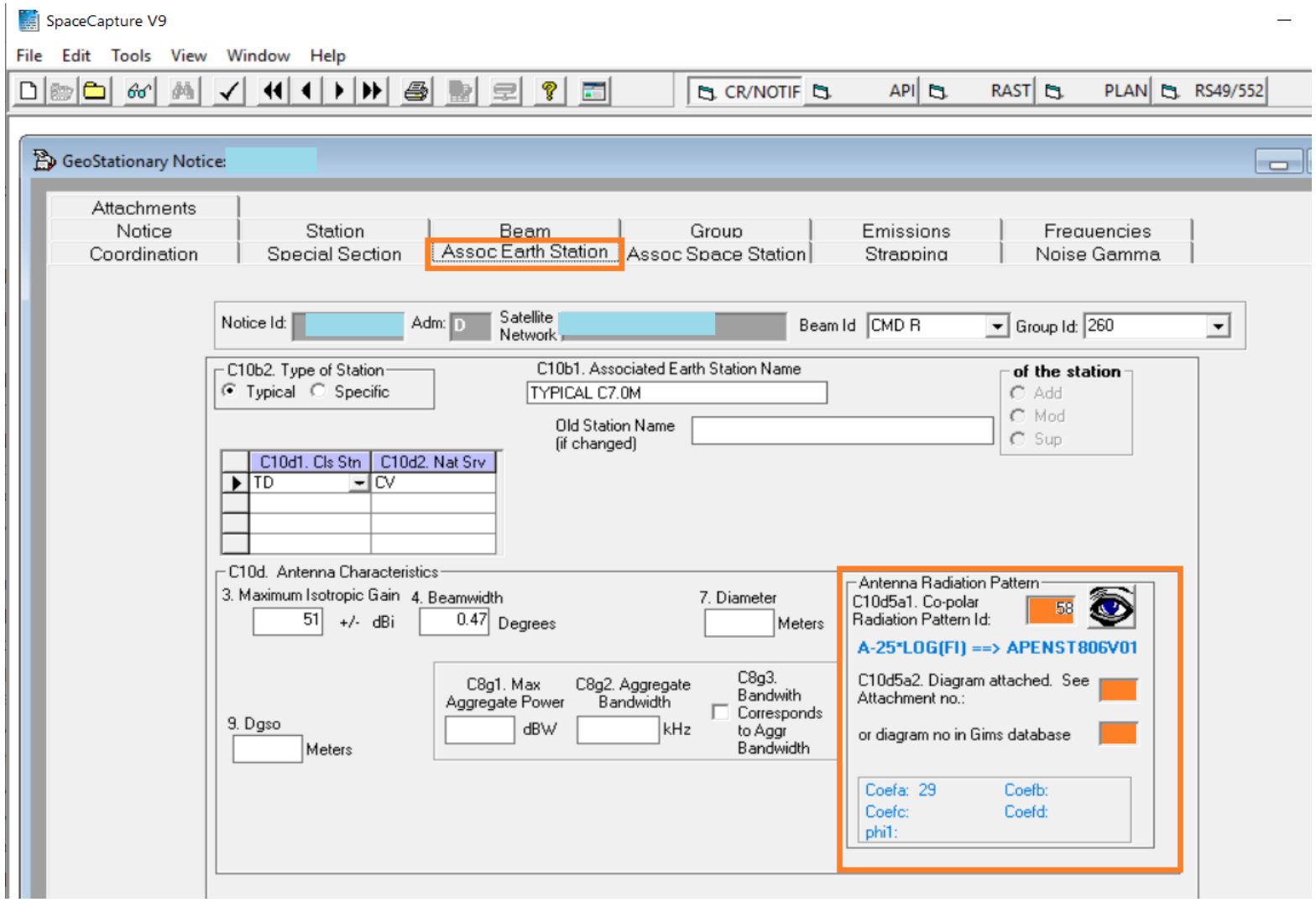
Diagrams such as images are not acceptable by BR's examination software, (default **AP8** antenna pattern will be used)

Example of SpaceCap_ Antenna Radiation Pattern for S/S



For space station/beam level, only for inter-satellite link

Example of SpaceCap_ Antenna Radiation Pattern for E/S



For standard co-polar Antenna Radiation Patterns

Kindly indicate the antenna pattern IDs by selecting from the Antenna Pattern Library (APL) available at the webpage:

https://www.itu.int/en/ITU-R/software/Pages/ant-pattern.aspx

Eg. Earth Station co-polar Antenna Radiation Patterns

AP7	APERR_012V01	Appendix 7 Earth station antenna pattern for the determination of the coordination area around an earth station in frequency bands between 100 MHz and 105 GHz.	Receiving	32
			Transmitting	75
Non-directional	APEND_099V01	Non-directional earth station antenna pattern.	Receiving	607
			Transmitting	608

Eg. Space Station co-polar Antenna Radiation Patterns

Non-directional	APSND_499V01	Non-directional space station antenna pattern.	Receiving	610
			Transmitting	609

See more details from the webpage

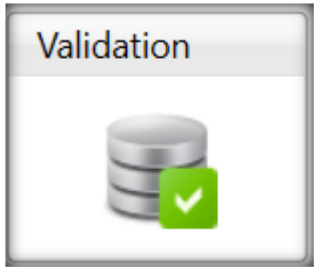
Table of Contents

Databases to be submitted

Appendix 4

Notice Database

BR SIS



Cross validation

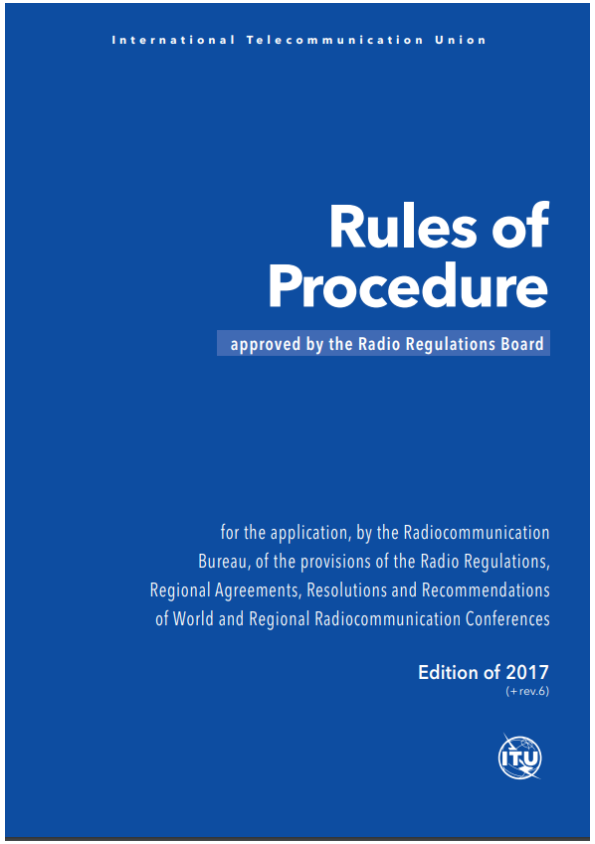
No fatal error !

Diagram Database

Use the latest BR software

CR/464 **only GIMS mdb format** shall be receivable under **RES 55**.

Rules of Procedure (ROP) on Receivability: Submission of information in electronic format



All notices for satellite networks shall be submitted to the Bureau in electronic format which is compatible with the BR electronic notice form capture software (SpaceCap and GIMS), using the ITU web interface "e-Submission of satellite network filings" available at

https://www.itu.int/itu-r/go/space-submission.

Notices submitted using "e-Submission of satellite network filings" for space services shall be recorded as received on the actual date of receipt, irrespective of whether or not that is a working day at the ITU/BR's offices in Geneva.

Notices submitted using "e-Submission of satellite network filings" for space services do not require any separate confirmation by telefax or mail.

Receipt of notices related to space services shall be acknowledged immediately

Submission of Notification requests for GSO networks

Recording in MIFR

Article 11 of the Radio Regulations

“ Assignments (final characteristics) have to be notified under Article 11 to be recorded in the MIFR for international recognition within the regulatory period (7 years from the date of receipt of the Corresponding CRC)

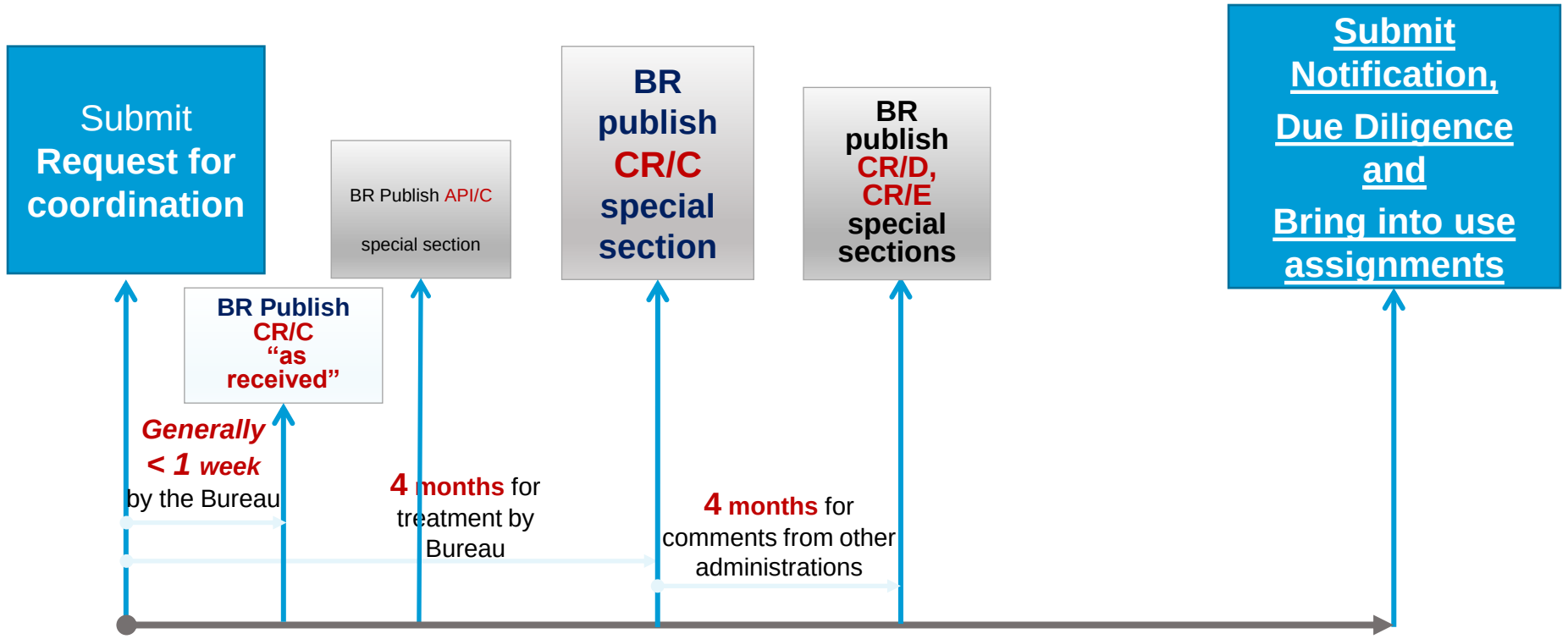
ROP: Application of multiple procedures

The Radio Regulations prescribe, in some cases, the application of multiple procedures, which have to be applied, for the same stations or satellite network, one after another. In such cases, a notice for a particular procedure is receivable only if the previously applicable procedure has been effected.

4.3.1 A notification under Article 11 is not receivable if the coordination request, where applicable, was not received for the satellite network (No. 9.6 refers) and shall be returned to the notifying administration.

4.3.2 A notification under Article 11 is not receivable if the advance publication information under Sub-Section IA of Article 9, where applicable, was not received for the satellite network and shall be returned to the notifying administration.

ITU process for satellite networks subject to coordination



Receivability Notification

Ckecking date of receipt against DBIU

- 11.25

(Date of bringing into use indicated in the notice - Date of receipt of the notification) ≤ 3 years

- **11.44**

Notified date of bringing into use shall not be later than the 7-year regulatory limit (No.11.44)

Submission and Receivability of Notices

Notices contain *mandatory* information contained in Annex 2 of Appendix 4 of RR

(BIU + Coordination agreements to be provided)

- ✓ SNS datae
- ✓ Graphical data (GIMS)

Submission of information in electronic format

- ✓ E-submissions Receivability §2 (RoP 2017 Rev.2)

Establishment of Date of Receipt (RoP *Receivability* §3)

- ✓ Completeness and Correctness
  - BRSIS SpaceVal Fatal Errors are the main guideline for completeness checks
  - BRSIS SpaceVal Warnings point to possible correctness issues
- ✓ Dealing with missing information
  - Correspondence exchanges

Notification of frequency assignments under No.4.4

➢RoP on No. 4.4 §1.6 : administrations prior to bringing into use any frequency assignment to a transmitting station operating under No. 4.4, shall determine:

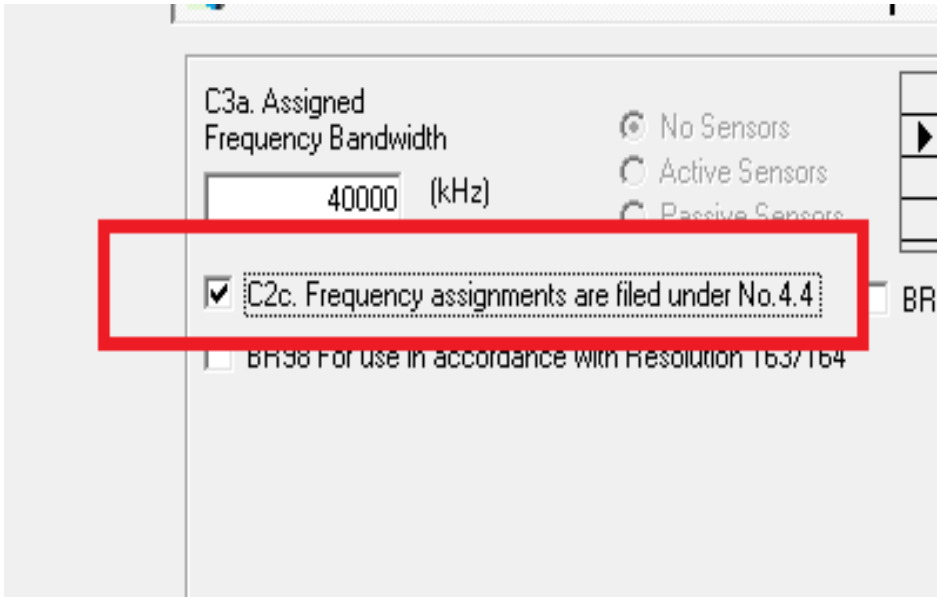
a) That the intended use of the frequency assignment to the station under No. 4.4 will not cause harmful interference into the stations of other administrations operating in conformity with the Radio Regulations;

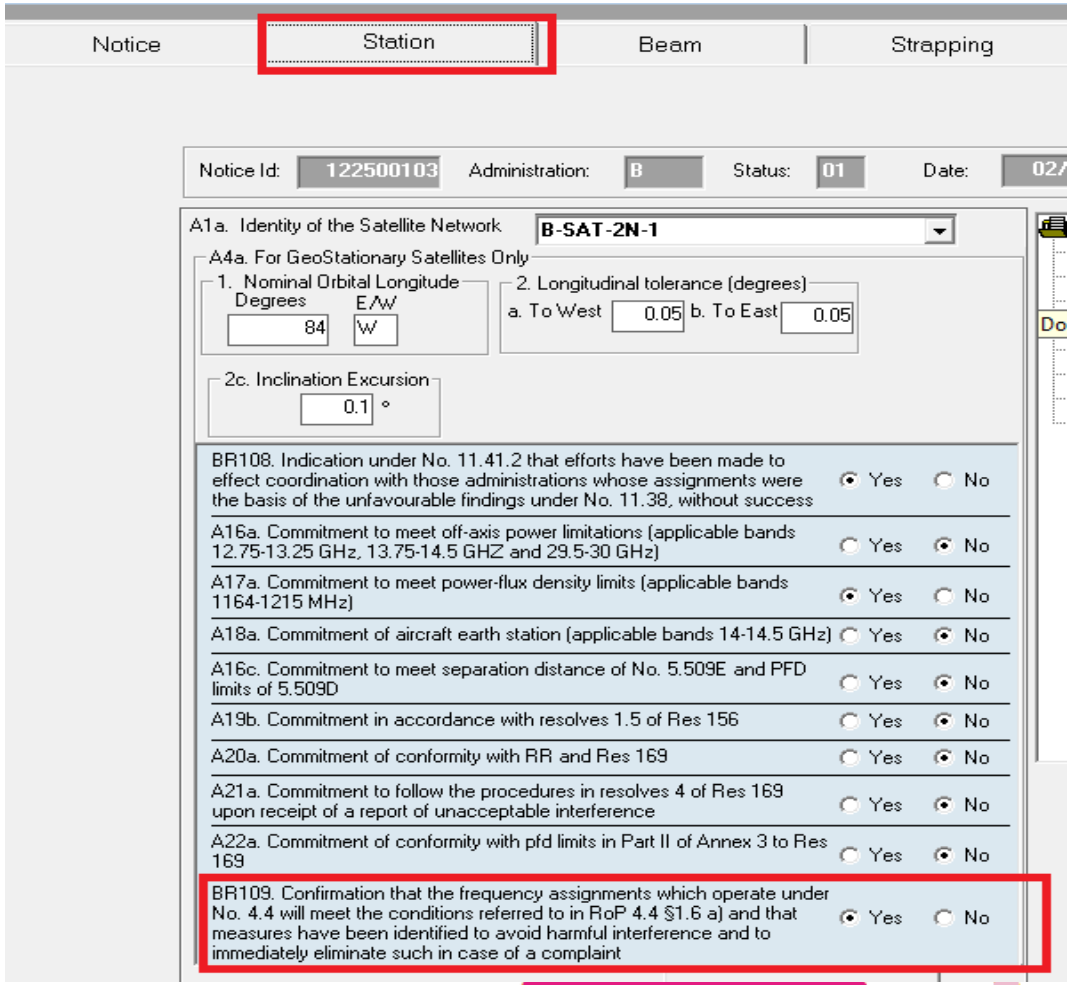
b) What measures it would need to take in order to comply with the requirement to immediately eliminate harmful interference pursuant to No. 8.5.

➢When notifying the use of frequency assignments to be operated under No. 4.4, the notifying Administration shall provide a confirmation that it has determined that these frequency assignments meet the conditions referred to above in item a) and that it has identified measures to avoid harmful interference and to immediately eliminate such in case of a complaint.

The Bureau will request this information upon reception of a notice that does not contain the confirmation

Notification of frequency assignments under No.4.4 (SpaceCap)





Notification of frequency assignments under No.4.4

As requested by WRC-23, BRSIS-SpacePub V10 includes in the summary table all the groups listed under No. 4.4

Résumé / Summary / Resumen / 綜述 / Резюме / خلاصة

B1a Beam designation	B2 Emi-Rcp	BR8 Action code	BR7a Group id.	C2c RR No. 4.4	BR9 Action code	13A Conformity with RR	C3a Assigned freq. band	BR47 Frequency band (MHz)	BR62 Expiry date for bringing into use	BR15 Provision reference	BR53 Nb of freq.	C4a Class of station	BR54 Nb of emiss	BR55 Nb of units
R5B	R		4933	Y			150000	5000 - 5150	27.08.2031	9.11A, 9.21, 9.7	1	E5	1	1
RAA	R		4923				500000	29500 - 30000	27.08.2031	9.7	1	EC	4	4
RUC12	R		4870				250000	14500 - 14750	27.08.2031	AP30A#7.1, 9.7	1	EC	8	8
			4872				250000	14500 - 14750	27.08.2031	AP30A#7.1, 9.7	1	EC	8	8
NAV L5	E		5404				20000	1166.45 - 1186.45	22.04.2031	9.11A, 9.7	1	EN	2	2
			5405				20000	1166.45 - 1186.45	22.04.2031	9.11A, 9.7	1	EN	2	2
T5B	E		4935	Y			150000	5000 - 5150	27.08.2031	9.11A, 9.21, 9.7	1	E5	1	1
TAA	E		5072				500000	19700 - 20200	27.08.2031	9.7	1	EC	12	12
TAC12	E		5157				400000	17300 - 17700	27.08.2031	AP30A#7.1, 9.7	1	EC	6	6
			5159				400000	17300 - 17700	27.08.2031	AP30A#7.1, 9.7	1	EC	2	2

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Notices containing steerable beams need to comply with RoP 21.16 and in particular provide the information in §3 b)

Notes specifying the method to meet those limits need to be provided during the notification step

Alternatively an Administration may request BR to reuse these data from the previous stage (API or CR/C)

Graphical data (GIMS) and other notes from the previous stage (API or CR/C) need to be provided again

Alternatively an Administration may request BR to reuse these data from the previous stage (API or CR/C)

Coordination agreements are to be captured in mdb

Databases to be submitted

Appendix 4

Notice Database

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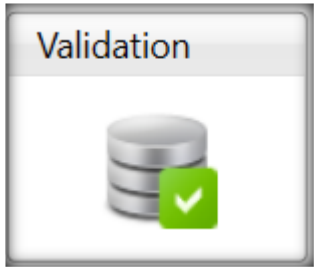

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Use the latest BR software

Thank you!

ITU – Radiocommunication Bureau

Questions to brmail@itu.int or akim.falou-dine@itu.int