



30<sup>TH</sup> WORLD RADIOCOMMUNICATION SEMINAR

24 – 28 October 2022

Geneva, Switzerland

# Appendix 30B submissions and publications

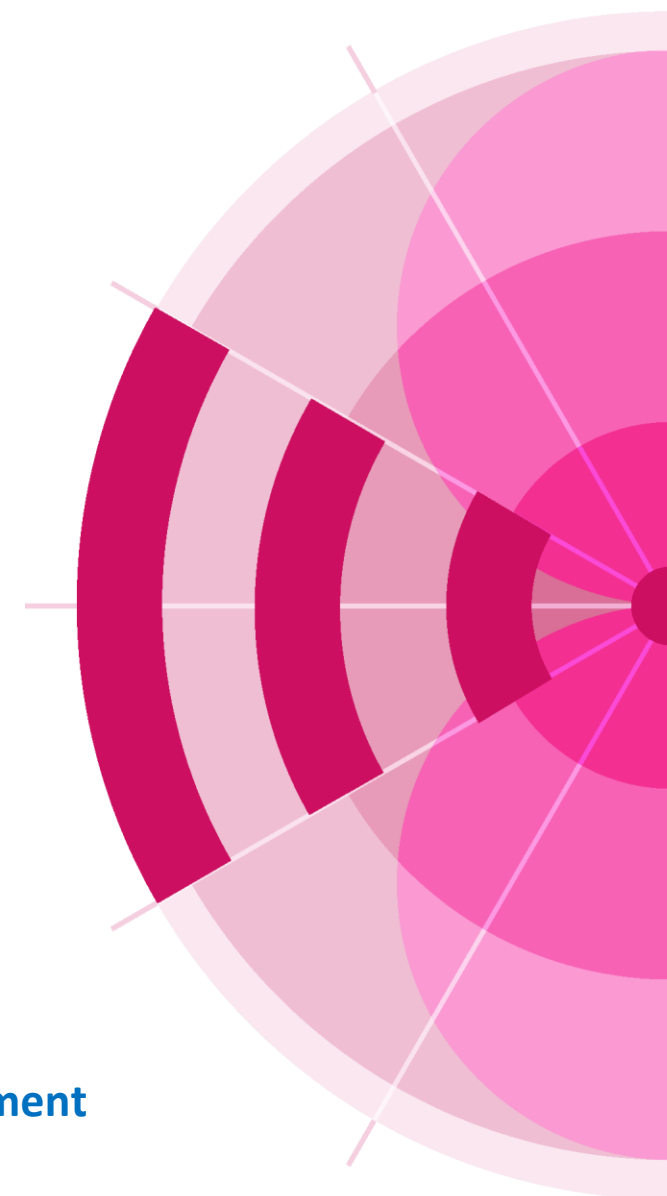
[www.itu.int/go/wrs-22](http://www.itu.int/go/wrs-22)

#ITUWRS

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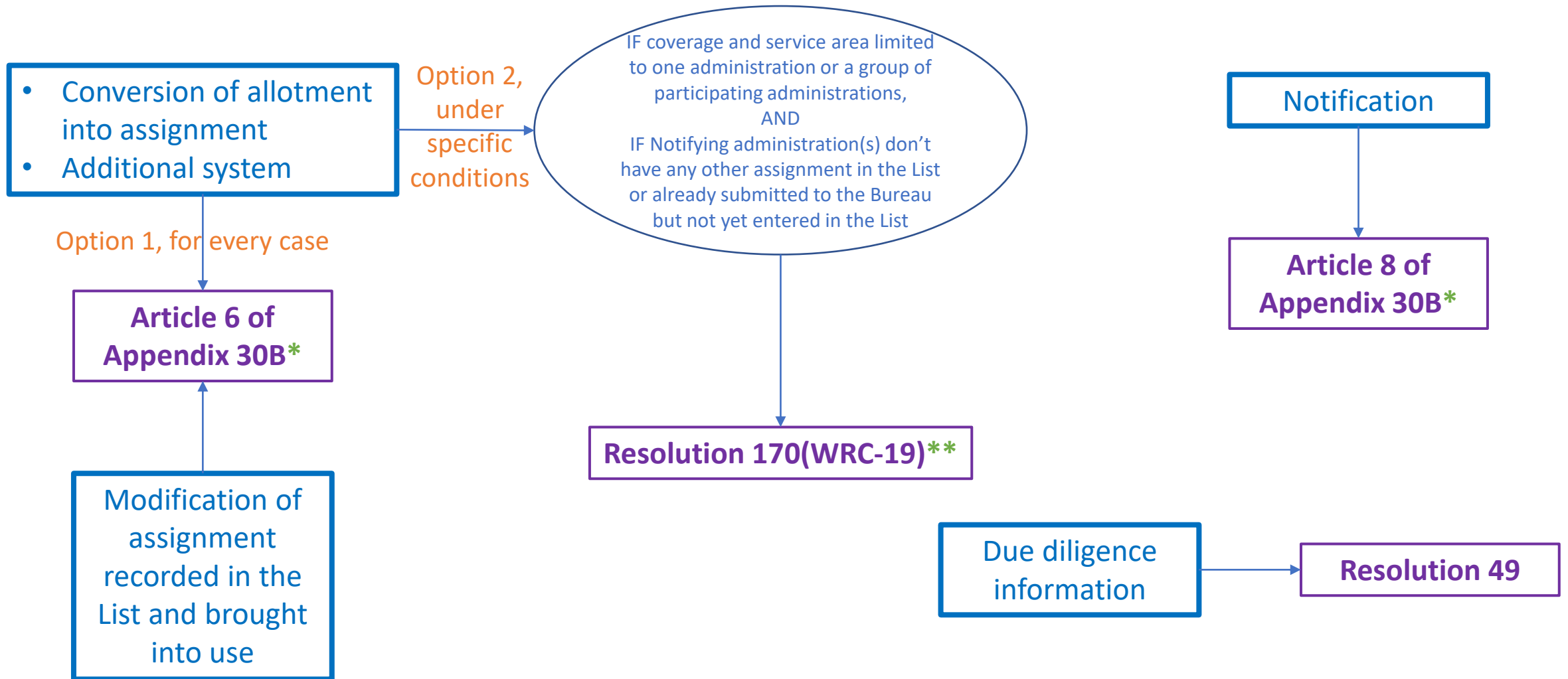


# When to submit a notice?

When your Administration needs to

- Convert your national allotment into assignment
- Apply for an additional system
- Modify an existing assignment in the List that has been brought into use
- Notify for recording in the Master Register
- Submit Due diligence information (treated in another presentation)

[In any of these cases you need to submit a notice to the Bureau](#)

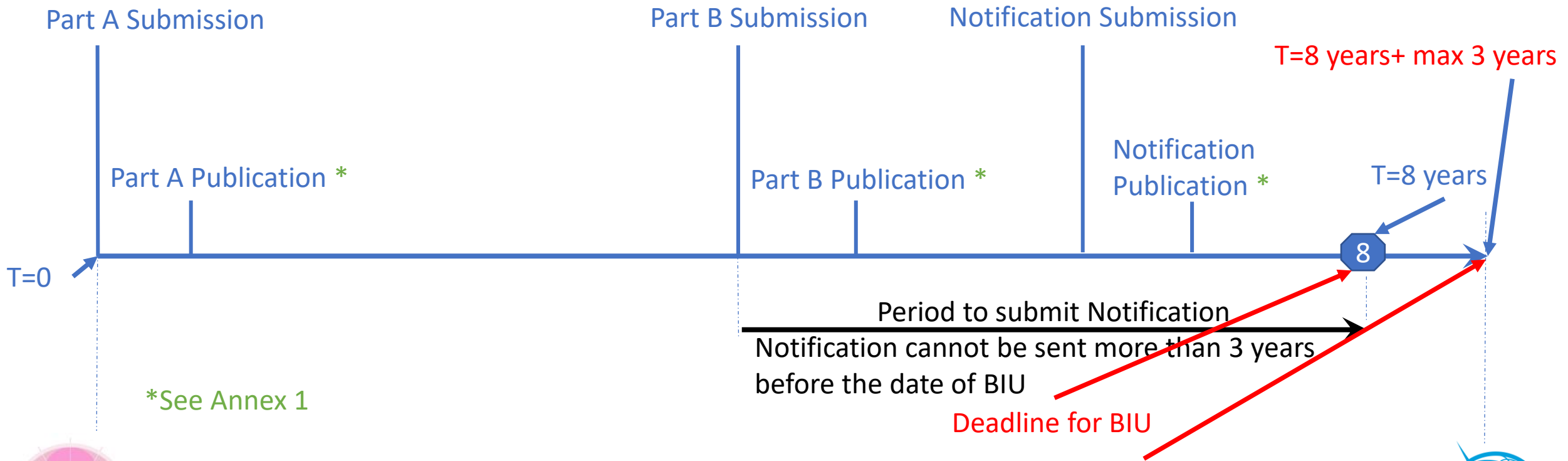


\* Data to be submitted -> Annex 2 of Appendix 4 (Article 6 and 8)

\*\* Data to be submitted -> Annex 2 of Appendix 4 (Article 6 and 8), see §3 of Attachment 1 to Resolution 170(WRC-19)

# When do you need to submit a notice?

The process of conversion, application for an additional system, modification of an assignment in the List or application of Resolution 170 can last up to 8 years



\*See Annex 1

Deadline for BIU if launch failure occurred at the end of the regulatory time limit and 3 years extension has been granted

# Data to submit

The minimum is the data indicated as mandatory in Annex 2 of Appendix 4 of Radio Regulations

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
A.1	IDENTITY OF THE SATELLITE NETWORK OR SYSTEM, EARTH STATION OR RADIOASTRONOMY STATION
A.1.a	the identity of the satellite network or system
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.e	Identity of the earth station or radio astronomy station:
A.1.e.1	the type of earth station (specific or typical)
A.1.e.2	the name of the station
A.1.e.3	For a specific earth station or radio astronomy station:
A.1.e.3.a	the country or geographical area in which the station is located, using the symbols from the Preface

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 2.A of Appendixes 30 or 30A	Notification or coordination of a non-geostationary-satellite network or system	Notification or coordination of an earth station (including notification under Appendixes 30A or 30B)	Notice for a satellite network in the broadcasting-satellite service under Appendix 30 (Article: 4 and 5)	Notice for a satellite network (header-link) under Appendix 30.A (Article: 4 and 5)	Notice for a satellite network in the fixed-satellite service under Appendix 30B (Article: 6 and 8)	Items in Appendix	Radio astronomy
X	X	X	X	X		X	X	X	A.1	
						+	+	+	A.1.a	
									A.1.b	
									A.1.e	
					X				A.1.e.1	
					X				A.1.e.2	X
									A.1.e.3	
					X				A.1.e.3.a	X

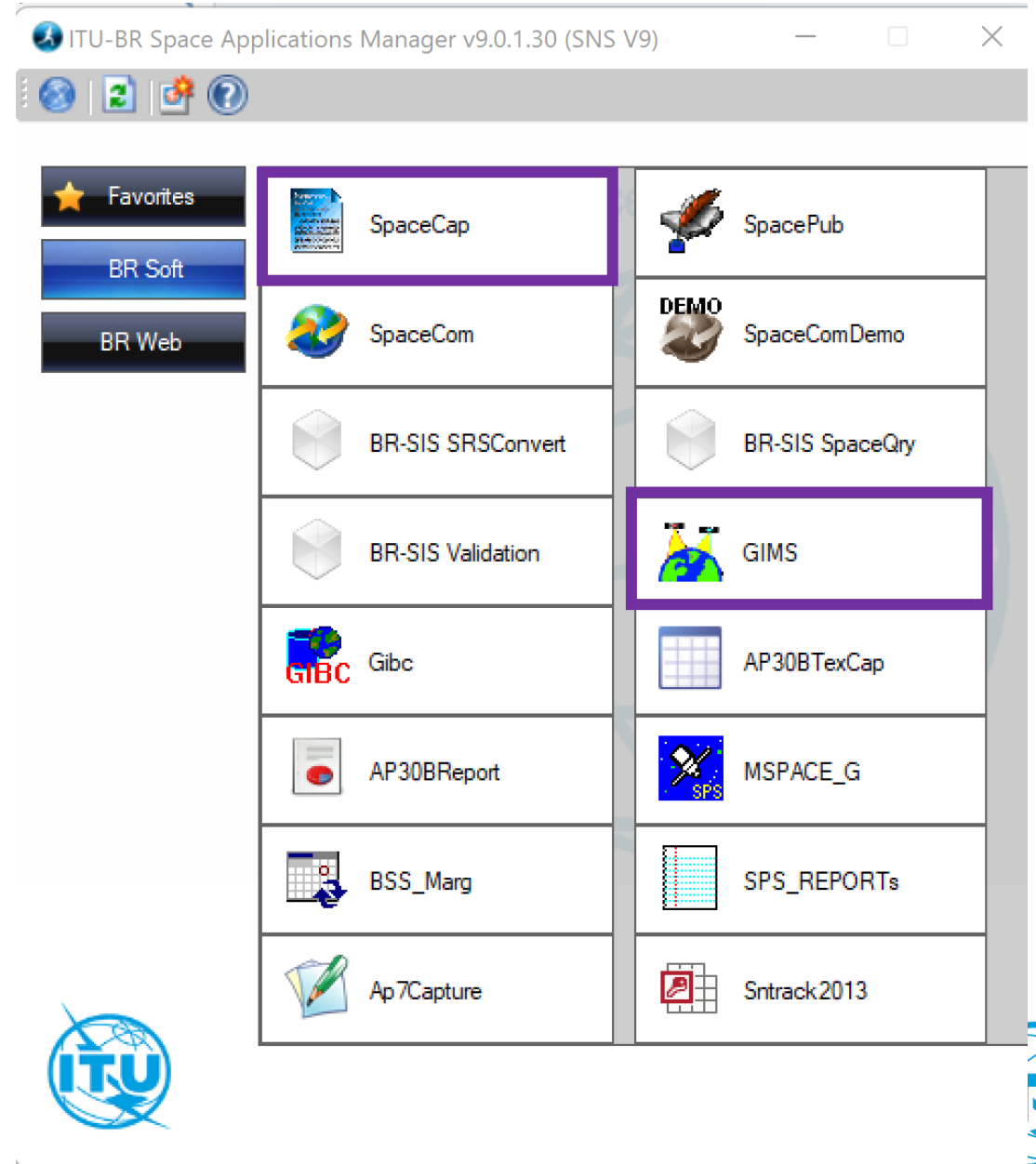
X	Mandatory information
+	Mandatory under the conditions specified in Column 2
O	Optional information
C	Mandatory if used as a basis to effect coordination with another administration
	The data item is not applicable to the corresponding notice

# In which format you need to submit these data?

You need to produce

- An SNS database for the alphanumeric data prepared with SpaceCap software and
- A Gims database for the graphical data prepared with GIMS software

See Annex 2



The screenshot shows the ITU-BR Space Applications Manager v9.0.1.30 (SNS V9) interface. The window title bar indicates the version and name. The interface features a sidebar on the left with navigation options: 'Favorites' (star icon), 'BR Soft' (blue button), and 'BR Web' (black button). The main area displays a grid of application icons and labels. The 'SpaceCap' icon (top left) and the 'GIMS' icon (middle right) are highlighted with a purple border. Other visible icons include SpacePub, SpaceCom, BR-SIS SRSCovert, BR-SIS SpaceQry, BR-SIS Validation, GIBC, AP30BReport, BSS\_Marg, Ap7Capture, DEMO SpaceComDemo, BR-SIS SpaceQry, AP30BTexCap, MSPACE\_G, SPS\_REPORTs, and Sntack2013. The ITU logo is visible in the bottom left corner, and a stylized 'U' logo is in the bottom right corner.

# Can you submit any data? : Hard limits

Before submitting your notice under Article 6 and Article 8 you need to check if the parameters of your satellite network are compliant with the hard limits. If not compliant, some assignments or the entire notice (in case of A6B submission) may be returned

## RR Article 21 - Hard limits to protect terrestrial services

No 21.8

Power limits for Earth Stations

No 21.14

Minimum angle of elevation of Earth Station ( $3^\circ$ )

No 21.16

Limits of power flux-density from space stations

Check with  
GIBC(PFD/EIRP GSO)

## RR Article 22 - Hard limits to control interference to GSO systems

No 22.26

Off-axis power limits on Earth Station of a geostationary-satellite network in the Fixed-Satellite Service (12.75-13.25GHz)

Check with  
GIBC(Appendix 30B-  
Annex 3 PFD)

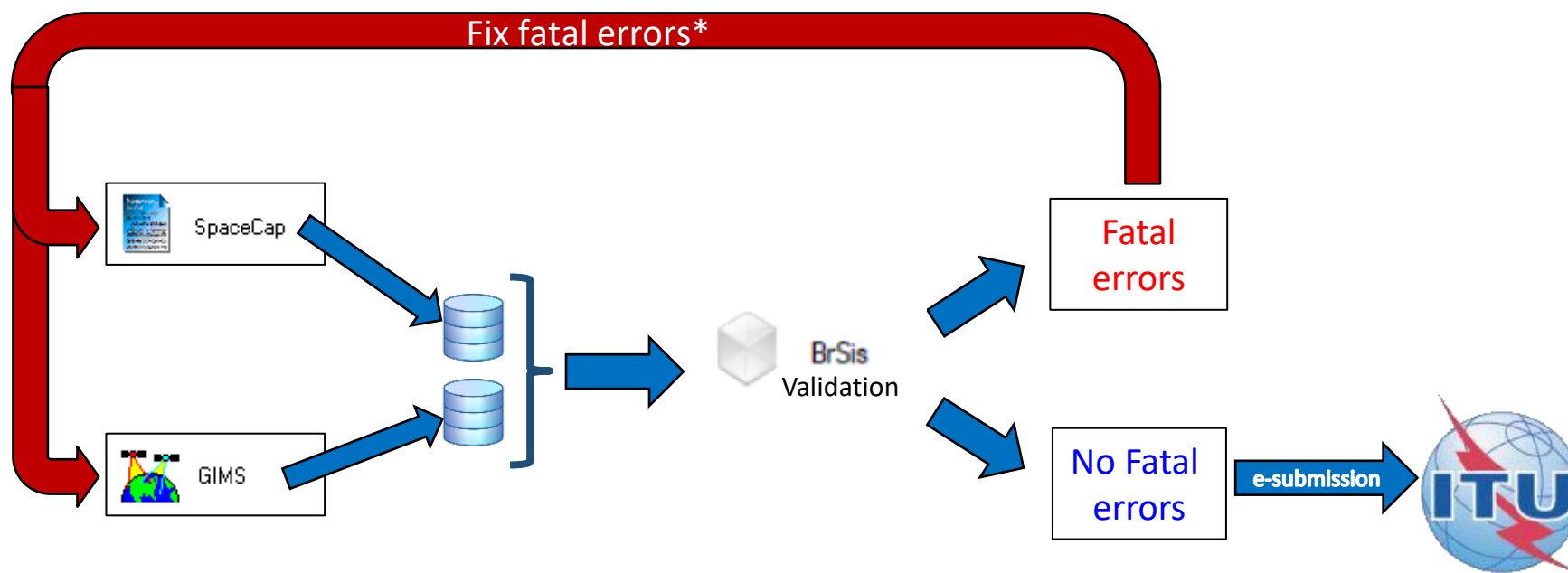
## Hard limits to protect satellite networks outside the coordination arc

AP30B Annex 3

Uplink and Downlink pfd limits

# Can you submit any data? : Validation

Before submitting your notice you need to validate it with BrSis - Validation





# Can you submit any data? : Completeness

Once your notice is received, the Bureau will check the completeness and the correctness of your data and will contact your Administration for clarifications

## What does the Bureau check?

### For both Part A and Part B submissions

- Simplification of the network
- Unrealistic gain contours
- Unrealistic combination of Earth Station/Space Station antenna gain and power density
- Alignment of coverage and service area
- Distribution and number of test points
- Alignment of test point location and service area
- Different sets of test points for same service area
- Different service areas but same set of test points
- Test points in disputed areas
- Fixed and steerable beams
- Exclusive operation code

### Specific for Part B and Notification submissions

- Explicit agreement for inclusion in the service area
- § 6.25 application
- More than one power density for Earth Station for the same beam and the same geographical area
- Single notice for Part B and notification

### Specific for Notification

- Declaration of Bringing into use
- Different data from Article 6 submission?

# Completeness

## For both Part A and Part B submissions

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### Simplification of the network [1]

Since the characteristics of a network in the List are considered, from the point of view of the interference caused to other networks, as the envelope of the all possible implementations of the satellite network,

Administrations don't need to submit very complex networks. It's enough to submit the worst case and every implementation within the envelope of this submission will be considered as compliant.

# Completeness

## For both Part A and Part B submissions

### Simplification of the network [2]

In addition, noting that

- from WRC-15 100 test points are allowed for each service area,
- the size of the input and output databases are growing fast and could reach the limit of MS Access (2GB)
- the speed of processing depends on the «size» of notices

Administrations are strongly invited to simplify the network to the maximum extent .

For Part A submission the Bureau invites the administrations to limit the submission to 1 beam and 1 service area for each band with a maximum of three Earth Station and a maximum of 2 power densities per Earth Station  
For PartB number of power densities per Earth Station shall be limited to 1.

# Completeness

## For both Part A and Part B submissions

### Simplification of the network [3] - EXAMPLE

4 Earth Stations (ES) and 3 power densities for each ES

Bureau proposal : 3 ES and 2 power densities per ES

Beam/E_R	Frequency Band	ES antenna gain [dBi]	Power density [dBW/Hz]
ABC/E	4500-4800 MHz	37	-65.0, -60.0, -55.0
		39	-65.0, -60.0, -55.0
		42	-70.0, -65.0, -60.0
		45	-70.0, -65.0, -60.0
ABC/R	6725-7025 MHz	47.4	-48.0, -43.0, -40.0
		48	-48.0, -43.0, -40.0
		50	-48.0, -43.0, -40.0
		52.3	-48.0, -43.0, -40.0



Beam/E_R	Frequency Band	ES antenna gain [dBi]	Power density [dBW/Hz]
ABC/E	4500-4800 MHz	37	-65.0, -55.0
		42	-70.0, -60.0
		45	-70.0, -60.0
ABC/R	6725-7025 MHz	47.4	-48.0, -40.0
		50	-48.0, -40.0
		52.3	-48.0, -40.0

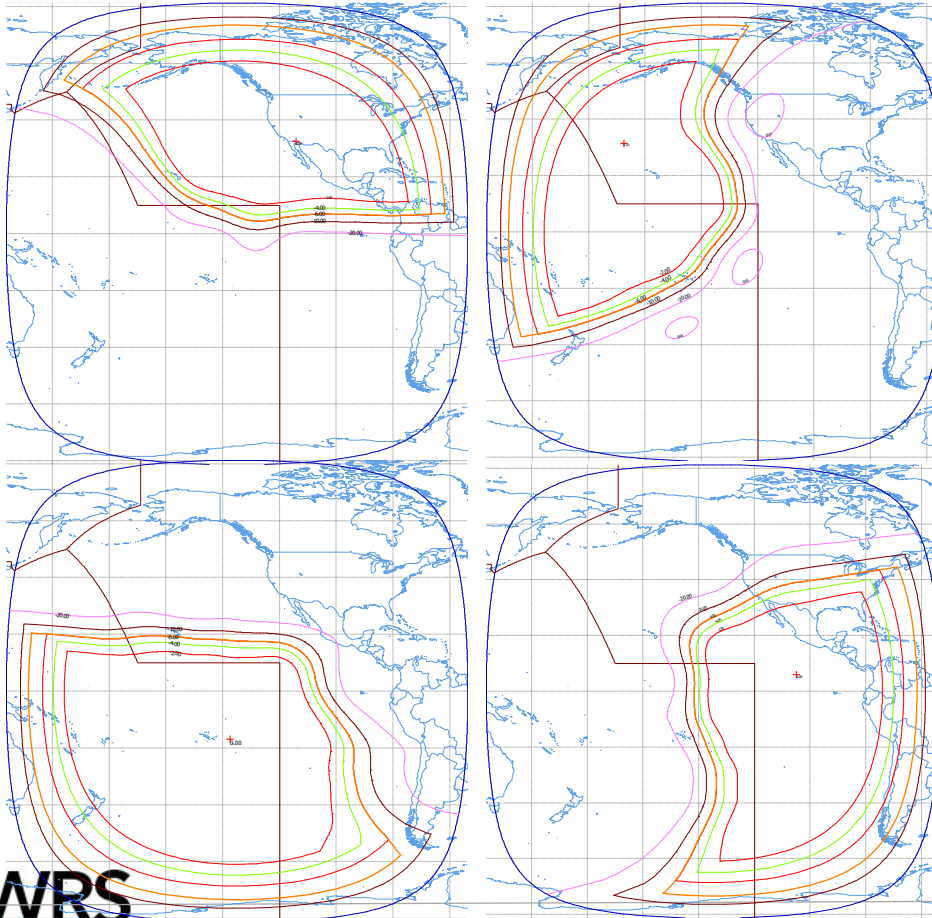
The assignments proposed for deletion are within the envelope of the remaining ones. For further Part B submission no change in flexibility.

# Completeness

For both Part A and Part B submissions

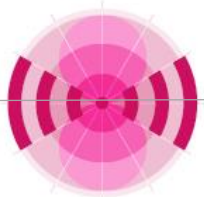
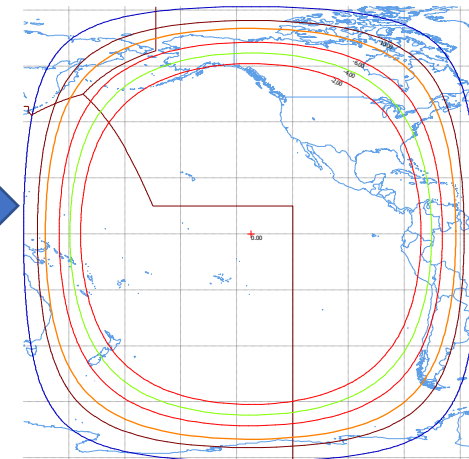
## Simplification of the network [4] - EXAMPLE

Submitted configuration



Configuration proposed by the Bureau and accepted by the Administration

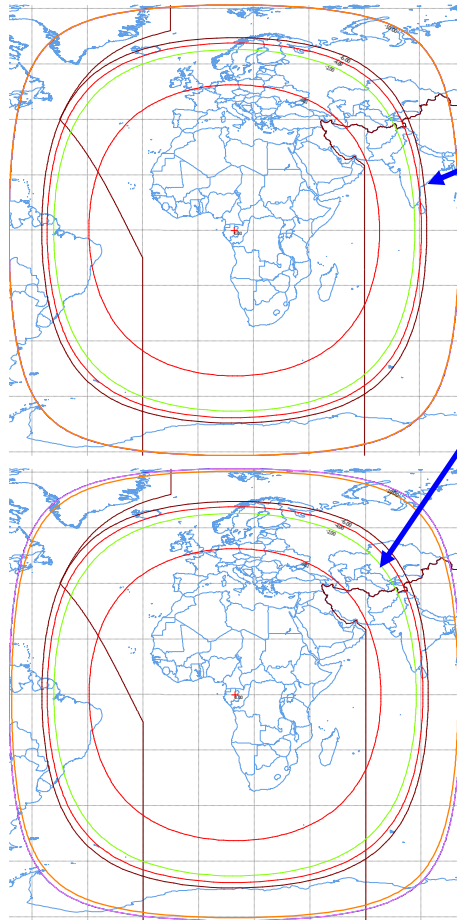
These four beams can be merged in one without any lost in flexibility for the notifying administration



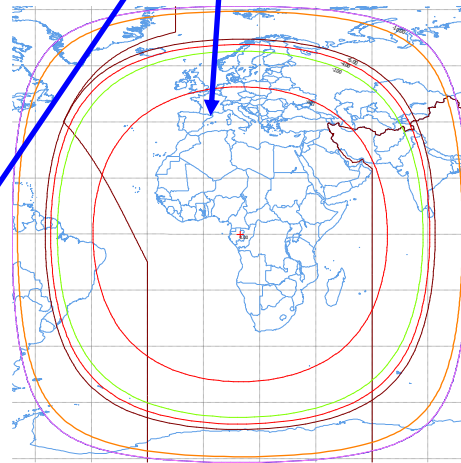
# Completeness

For both Part A and Part B submissions

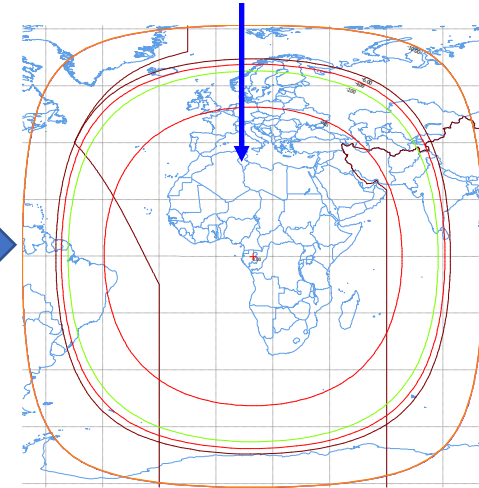
## Simplification of the network [5] - EXAMPLE



Submitted configuration  
3 global beams and  
service areas



Configuration proposed  
by the Bureau and  
accepted by the  
Administration: 1 global  
beam and service area

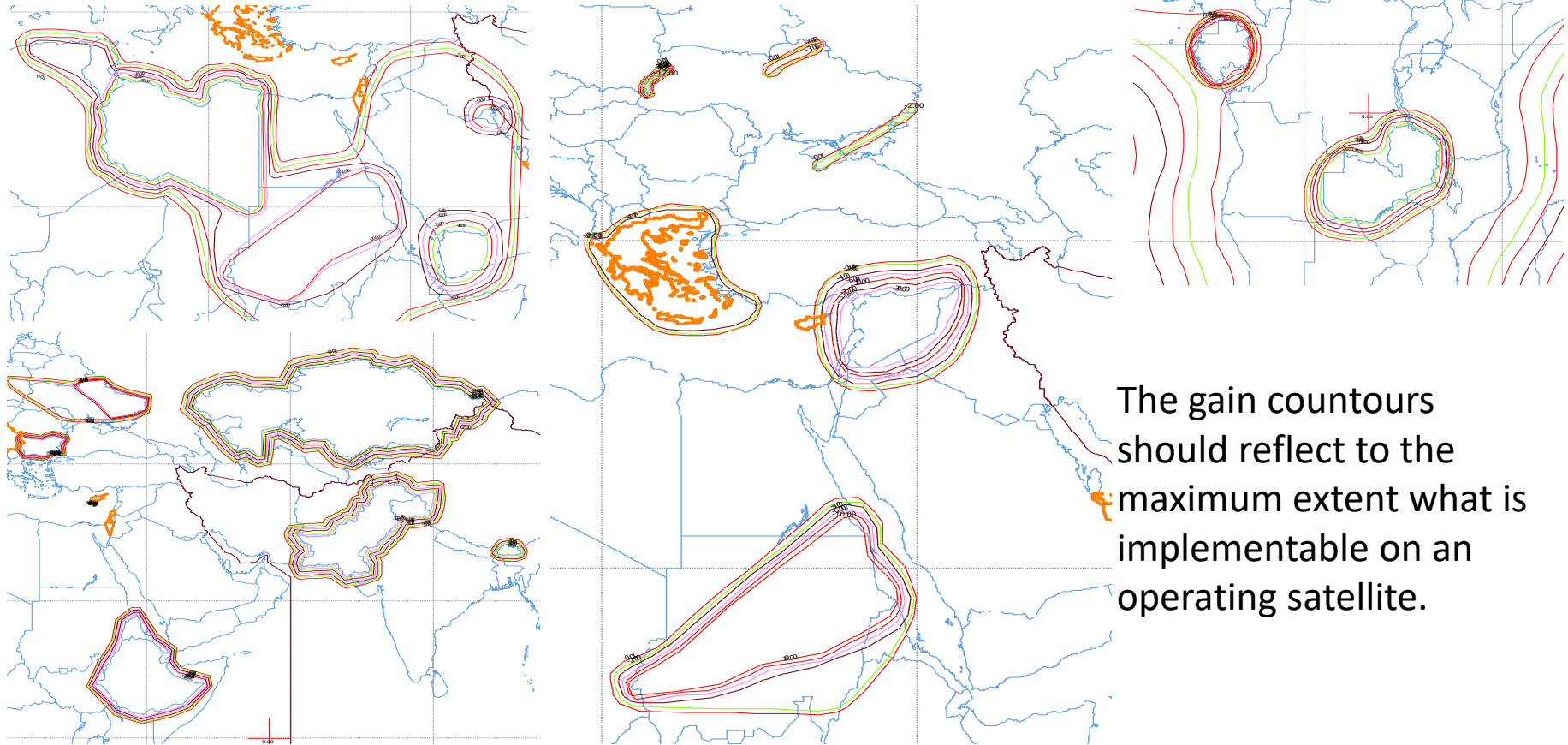


All possible different configurations are allowed in corresponding Part B submission

# Completeness

For both Part A and Part B submissions

## Irrealistic gain contours [1]

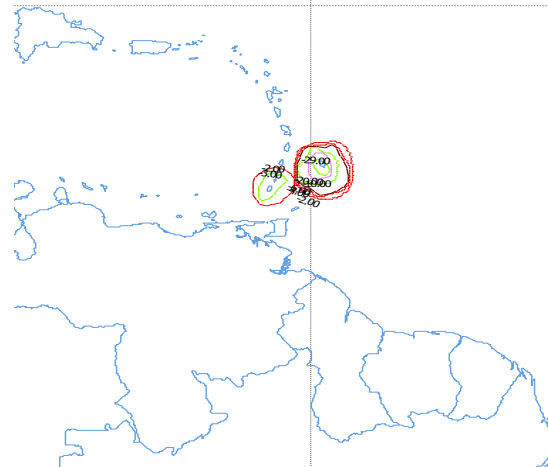
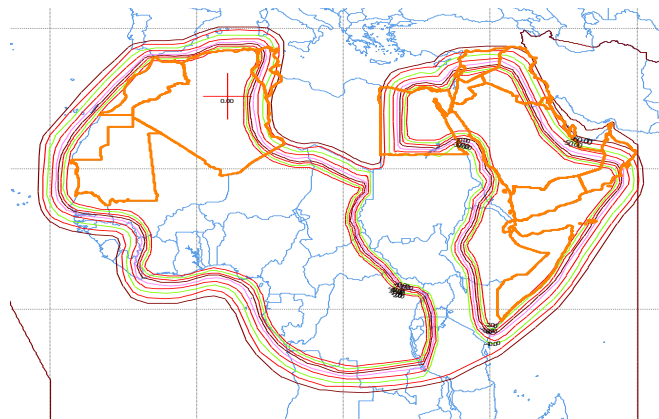
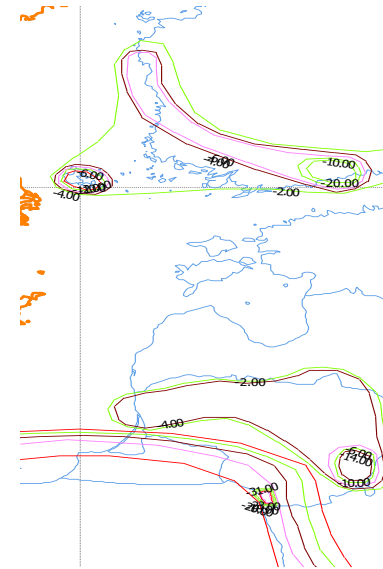
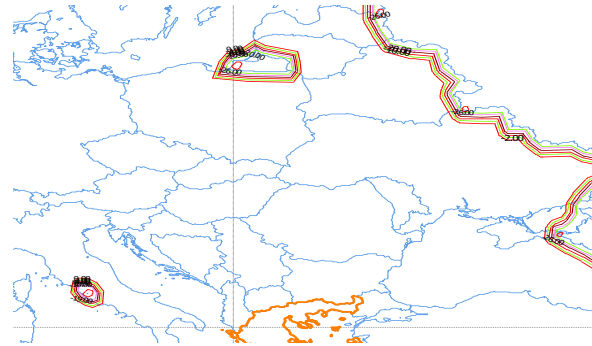
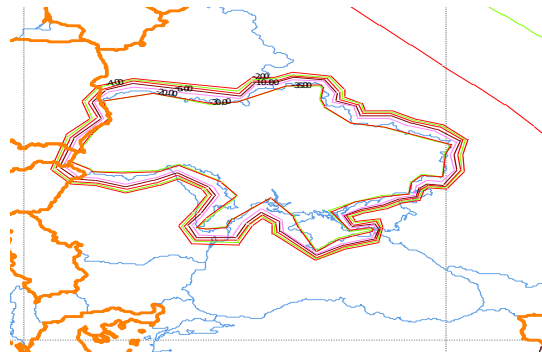


The gain contours should reflect to the maximum extent what is implementable on an operating satellite.

# Completeness

For both Part A and Part B submissions

## Irrealistic gain contours [2]



The gain countours should reflect to the maximum extent what is implementable on an operating satellite.



# Completeness

## For both Part A and Part B submissions

### Irrealistic combination of Earth Station diameter and power density

E/R	Frequency assignment [GHz]	Satellite gain [dBi]	Power density [dBW/Hz]	ES gain [dBi]	ES antenna diameter [m]	EIRP on 36MHz [dBW]	Max C/N [dB]
R	6.875	34.0	-75	25.1	0.30	25.1	-15.1
R	6.875	34.0	-75	28.7	0.45	28.7	-11.5
R	6.875	34.0	-75	31.2	0.60	31.2	-9.0
R	6.875	34.0	-75	33.7	0.80	33.7	-6.5
R	6.875	34.0	-75	35.6	1.00	35.6	-4.6
R	6.875	34.0	-75	37.2	1.20	37.2	-3.0
R	6.875	29.6	-72.6	37.3	1.22	39.7	-5.3
R	6.875	29.6	-72.6	39.8	1.62	42.2	-2.8
R	13	27.5	-70	24.3	0.14	29.3	-23.5
R	13	27.5	-66	24.3	0.14	33.3	-19.4
R	13	27.5	-57	24.3	0.14	42.3	-9.9
R	13	41.5	-70	24.3	0.14	29.3	-8.9
R	13	41.5	-66	24.3	0.14	33.3	-4.9
R	13	27.5	-49	24.3	0.14	50.3	-2.2
R	13	27.5	-70	27.0	0.20	32.0	-20.9
R	13	27.5	-66	27.0	0.20	36.0	-16.8
R	13	27.5	-57	27.0	0.20	45.0	-7.2
R	13	41.5	-70	27.0	0.20	32.0	-6.2
R	13	41.5	-66	27.0	0.20	36.0	-2.2
R	13	36.0	-65	30.7	0.30	40.7	-3.4
R	13	33.3	-72.6	37.2	0.64	39.6	-8.7
R	13	33.0	-72.6	37.2	0.64	39.6	-7.2
R	13	35.4	-72.6	37.2	0.64	39.6	-5.0
R	13	33.3	-69.5	41.3	1.02	46.8	-1.6
R	13	33.0	-69.5	41.3	1.02	46.8	0.0
E	4.65	25.0	-64.8	31.0	0.87	35.2	-6.8
E	4.65	30.0	-70.1	25.3	0.45	34.9	-2.9
E	11.075	36.1	-84.5	36.0	0.65	26.6	-10.8
E	4.65	30.0	-69.6	25.3	0.45	35.4	-2.6
E	11.075	37.0	-69.4	31.3	0.38	42.6	1.6

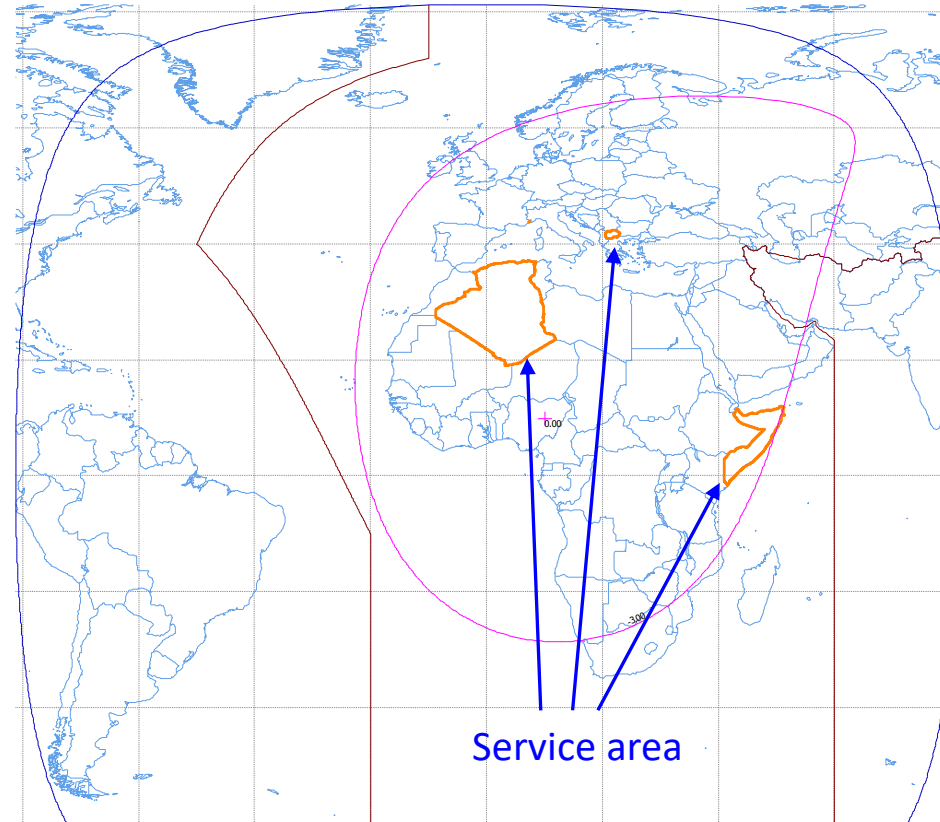
The Bureau receives several submissions with a combination of Earth Station/Space Station antenna gain and power density leading to a C/N extremely low. The Bureau invites administrations to submit realistic values.

# Completeness

For both Part A and Part B submissions

## Alignment of coverage and service areas [1]

In order to reduce to the maximum extent the impact over the territories not included in the service area, coverage and service areas should be aligned.

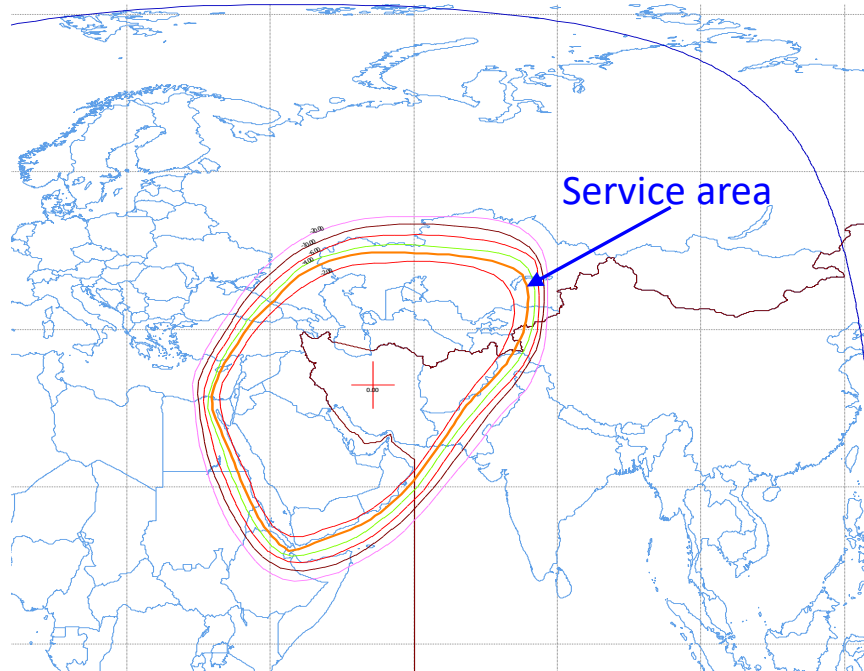


# Completeness

For both Part A and Part B submissions

## Alignment of coverage and service areas [2]

Example of a service area aligned with the coverage

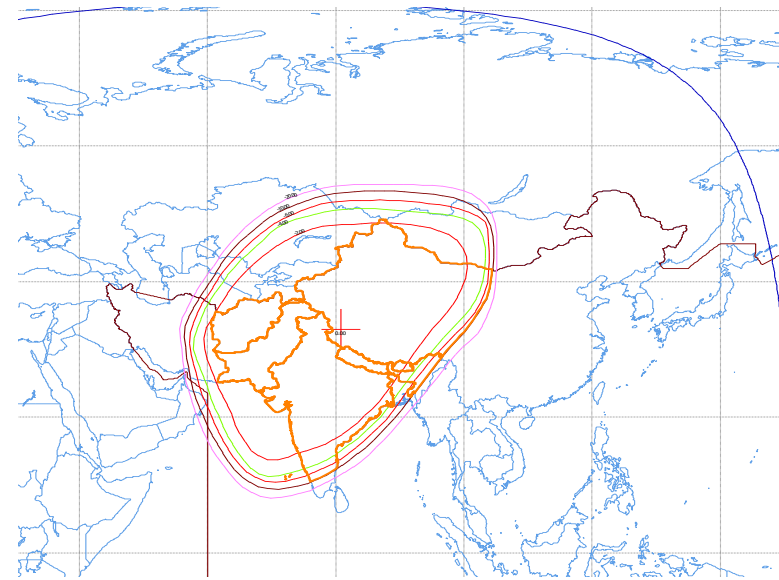
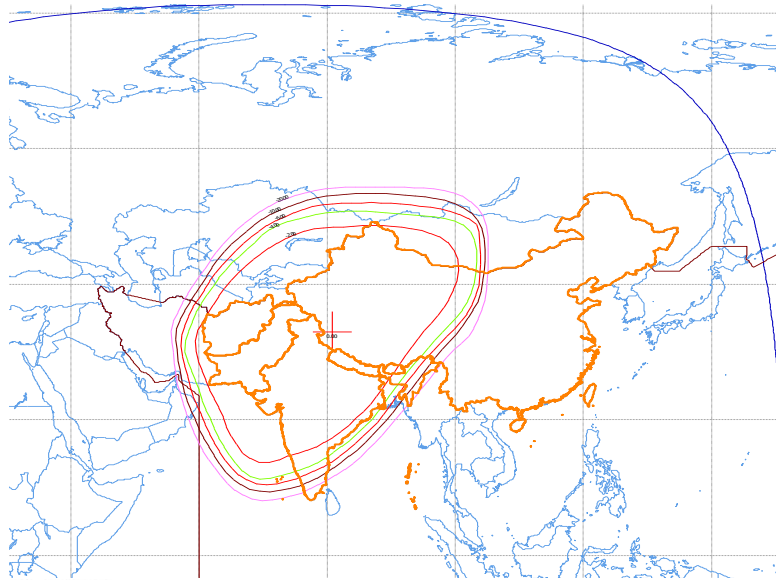


# Completeness

## For both Part A and Part B submissions

### Alignment of coverage and service areas [3]

In addition, as the service area represents the area where the service is provided, it should be covered by a relative gain not too low. Your Administration should either modify the coverage or, if the coverages have been already fixed, clip the service area with a reasonable gain contour.



# Completeness

## For both Part A and Part B submissions

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### Test points and service area

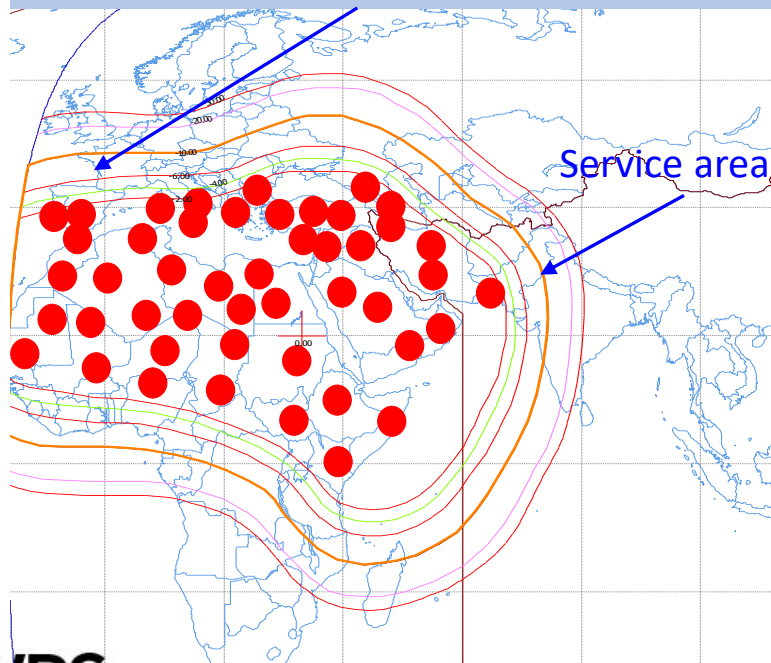
- A service area is defined by a set of test points in a 1-to-1 relation. Same set of test points shall describe the same service area.
- Sovereignty of disputed territories is not yet settled, therefore test points cannot be located in disputed territories. In the Preface, you can find the list of the Countries and Geographical Areas. In case of disputed territory, the notifying administration is indicated as XZZ.
- Test points should be located on land and within service area. If not, SpaceVal will give a fatal error.

# Completeness

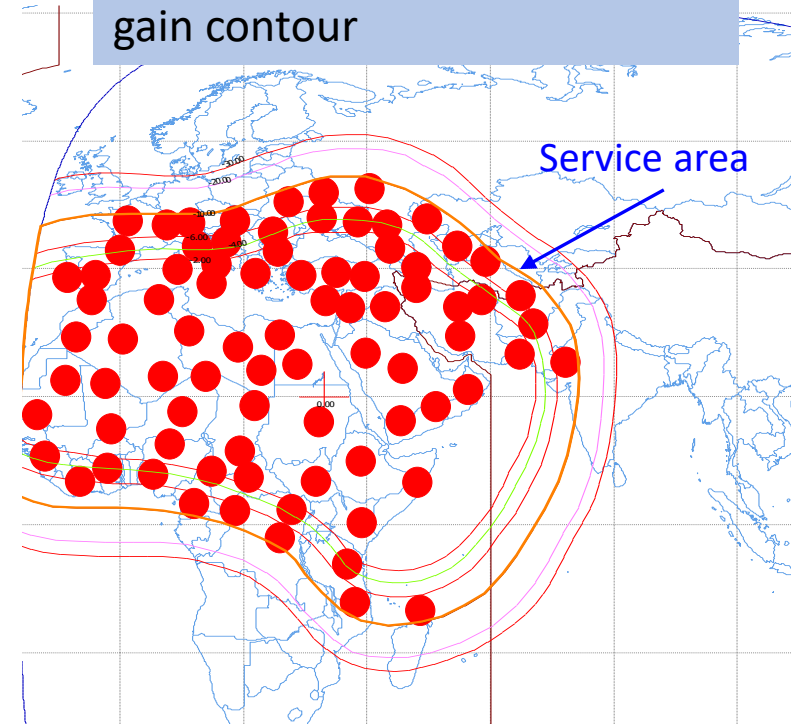
For both Part A and Part B submissions

## Test point location

No test point is submitted to represent the portions of the service area with different relative gain



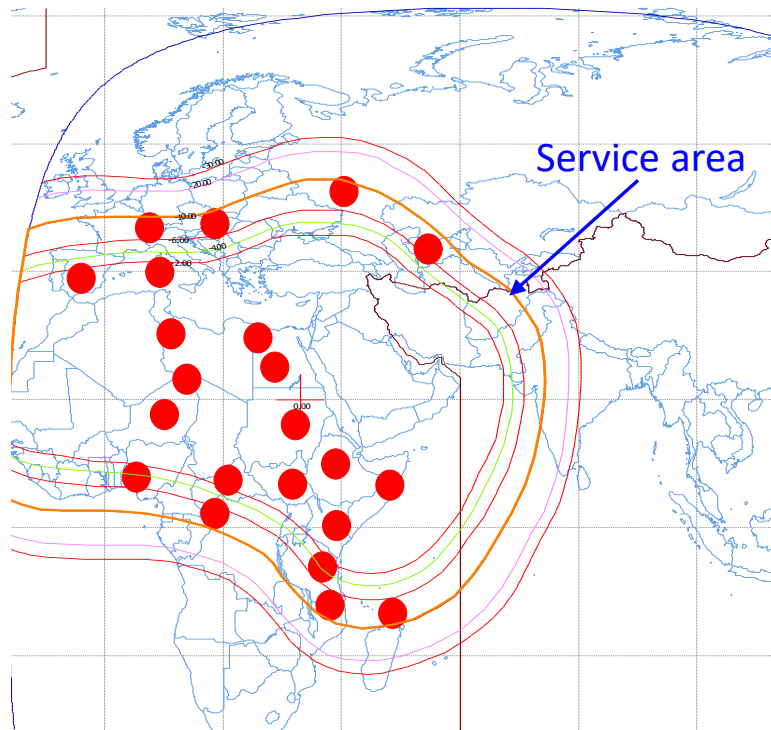
Test points should represent all areas with different relative gain contour



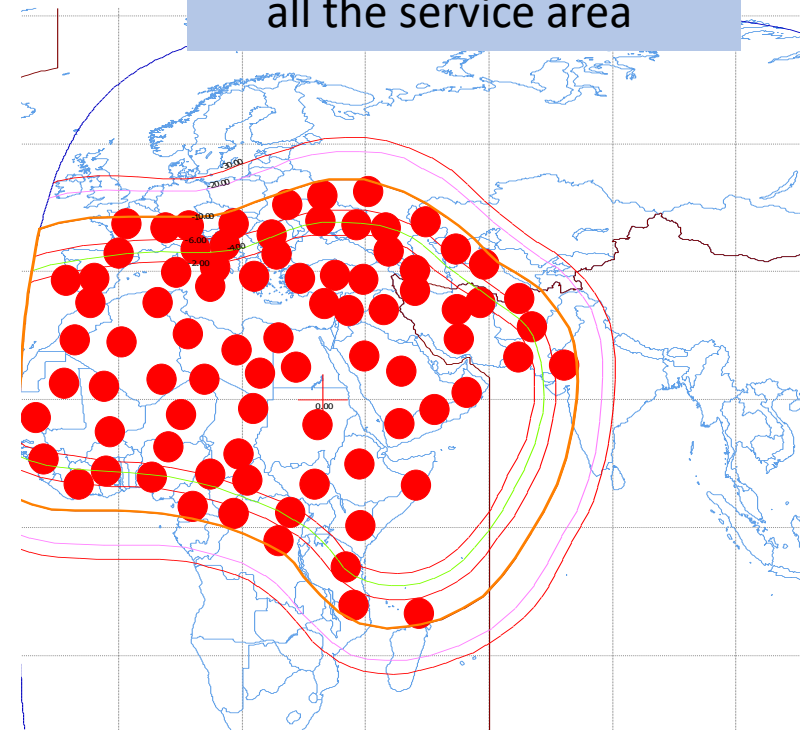
# Completeness

For both Part A and Part B submissions

## Test point distribution



- Test points should be evenly distributed on all the service area



# Completeness

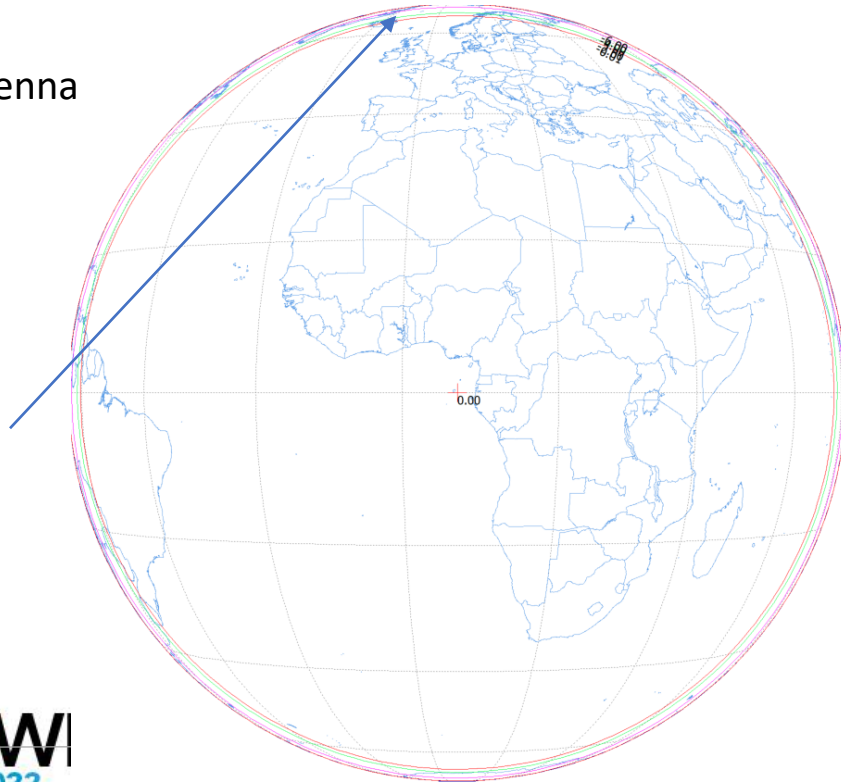
For both Part A and Part B submissions

## Fixed and steerable beams

When two beams with considerably different size of coverage have the same satellite antenna gain, the Bureau asks confirmation to the notifying administration to consider the big one as steerable

Maximum  
satellite antenna  
gain: 42dBi

-2db



Maximum  
satellite antenna  
gain: 42dBi

-2db





# Completeness

## For both Part A and Part B submissions

### Exclusive operation code [1]

It is required

- when for each frequency band, a network has more than one group and these groups don't operate simultaneously, and/or
- when two or more networks are at the **same orbital position** and they don't operate simultaneously.

It should be provided in order

- Not to consider interference among assignments having the same code and to avoid severely degrade the reference situation of incoming network and therefore diminish protection,
- To consider only the worst case among the assignments grouped together in the calculation of C/I aggregate of assignments not having the same exclusive operation code.

# Completeness

## For both Part A and Part B submissions

### Exclusive operation code [2]

- It should be provided at the time of submission. If only for internal grouping, the value 999 should be submitted
- Networks at the same orbital position and notified by the same administration can be grouped together,
- There is no limit to the number of networks that can be grouped together.

In case of a conversion of an allotment to an assignment at another orbital position, or in case of modification of the orbital position of an assignment in the List, the assignments at the different orbital positions will be grouped together temporarily up to the successful conversion or modification when the original allotment or the original assignment in the List will be deleted (except if the conversion applies §6.25 for a provisional entry in the List).

# Completeness

## Specific for Part B submission

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### Explicit agreement for inclusion in the service area

- The notifying administration has to confirm that any administration whose territory(ies) has been included in the service area has given its explicit agreement
- The information of the agreements can be submitted in the SNS database and/or in the cover letter. Information in the SNS database and in the cover letter should be consistent

# Completeness

## Specific for Part B and notification submissions

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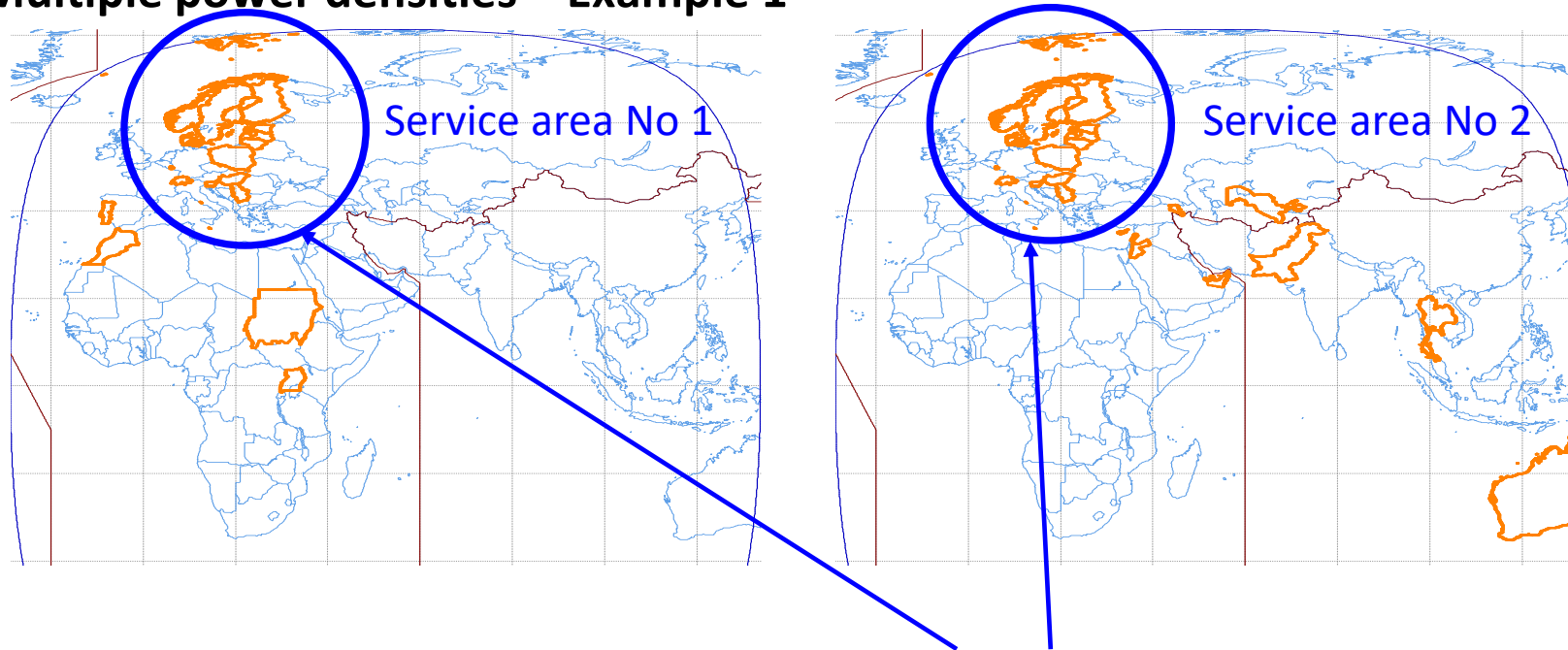
### Multiple power densities

- Multiple assignments with same characteristics except power density values are only allowed for submissions under §6.1 of Appendix 30B

# Completeness

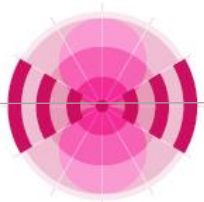
## Specific for Part B submission

### Multiple power densities – Example 1



Power density [dBW/Hz]	ES antenna gain [dBi]	Service area number
-60.6	49.8	1
-60.6	55.9	
-60.6	62.0	
-47.6	49.8	2
-47.6	55.9	
-47.6	62.0	

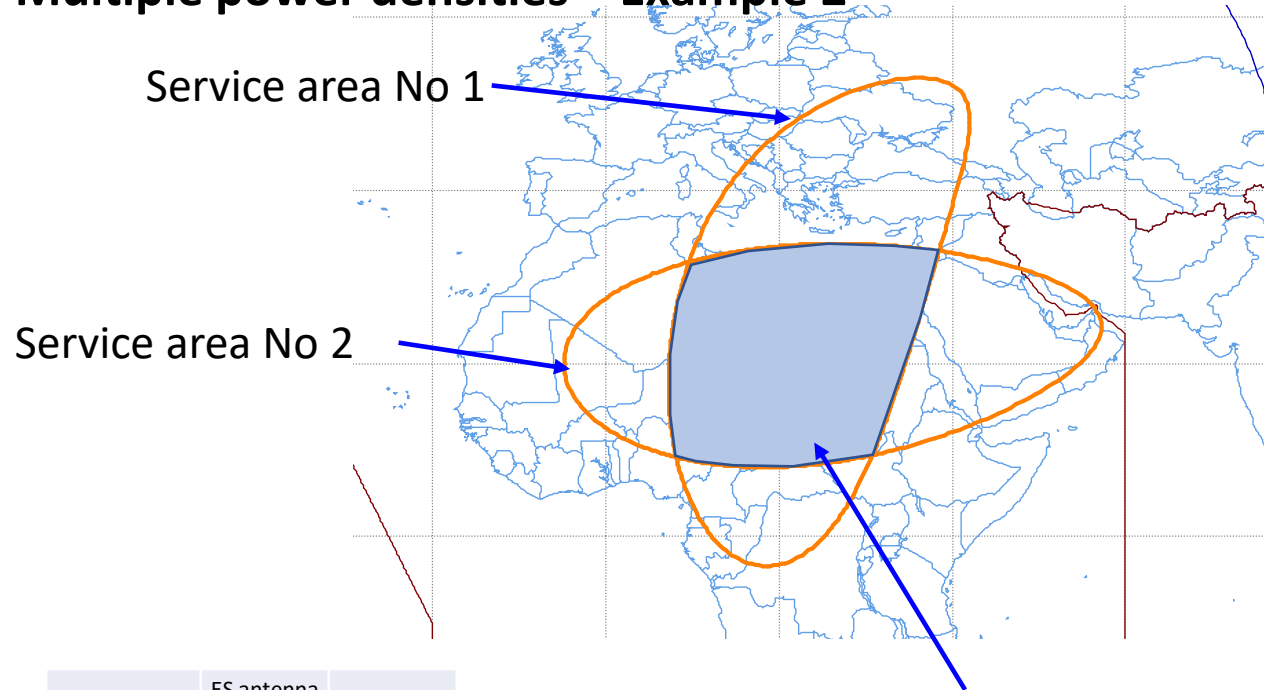
In the overlapping area (Europe) assignments have the same size of earth station antenna with two different power levels. This is not allowed for Part B submission.



# Items to be considered

## Specific for Part B submission

### Multiple power densities – Example 2



Power density [dBW/Hz]	ES antenna gain [dBi]	Service area number
-60.6	49.8	1
-60.6	55.9	
-60.6	62.0	
-47.6	49.8	2
-47.6	55.9	
-47.6	62.0	

In the overlapping area assignments have the same size of earth station antenna with two different power levels. This is not allowed for Part B submission.

# Completeness

## Specific for Part B submission

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### Application of §6.25

- §6.25 allows a satellite network to enter provisionally in the List if not all the agreements of affected assignments have been obtained, under the condition that allotment are not affected, or an agreement has been provided.
- In order to apply this provision notifying administration shall submit **a signed commitment under §6.26** indicating that use of an assignment recorded in the List under §6.25 shall not cause unacceptable interference to, nor claim protection from, those assignments for which agreement still needs to be obtained.

# Completeness

## Specific for Part B and notification

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### Single notice for Part B and notification

- If the characteristics of Part B and notification are the same, the administration can submit a single notice. However the single notice shall be the **notice corresponding to notification**, and not the notice corresponding to Part B. That is different from the practice in the BSS and associated feeder-link Plans.

Once you have prepared your Part B notice, the following modification could be used to convert this notice to the notification:

- Change the provision to A30B#8.1
- Introduce DBIU
- Introduce Operating agency and responsible administration
- Introduce Designation of emission (ex. 250MG7W-- or 300MG7W--)

If you wish to submit a different frequency plan, it's advisable to submit different notices for Part B and Notification



# Completeness

## Specific for Notification

### Declaration of Bringing into use

A **complete** declaration has to include the mandatory information. Two possible cases, in accordance with

- **No 11.44B of the Radio Regulation:** 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 90 days**. The notifying administration shall so inform the Bureau within 30 days from the end of the 90-day period,

or

- **No 11.44B.2 of the Radio Regulation:** 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.**

# Completeness

## Specific for Notification

---

### Different data from Article 6 submission?

In case of different data between Article 6 and Article 8 submission, the technical characteristics of the notice under Article 8 shall be within the envelope of the characteristics submitted under Article 6

# Thank you!

ITU – Radiocommunication Bureau

Questions to [brmail@itu.int](mailto:brmail@itu.int) or [patrizia.russo@itu.int](mailto:patrizia.russo@itu.int)



# Annex 1

# Publication – Part A



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS  
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION  
RADIOCOMMUNICATION BUREAU

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RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE	<b>HISPASAT-2-52.5W</b>		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º	<b>AP30B/A6A/692</b>	
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	<b>E</b>	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	<b>52.5 W</b>	BR IFIC / DATE BR IFIC / DATE BR IFIC/ FECHA	<b>2981 / 04.10.2022</b>
NOTIFIÉ AU NOM DE NOTIFIED ON BEHALF OF NOTIFICADA EN NOMBRE DE				NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	<b>122559005</b>
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL				<b>29.04.2022</b>	

Publication au titre des dispositions de l'Article 6 de l'Appendice 30B du Règlement des radiocommunications	Publication under provisions of Article 6 of Appendix 30B to the Radio Regulations	Publicación con arreglo a las disposiciones del Artículo 6 del Apéndice 30B del Reglamento de Radiocomunicaciones
Renseignements concernant: [ X ] une fiche de notification reçue au titre du § 6.1, ou [ ] une fiche de notification considérée comme une soumission au titre du § 6.1 conformément au § 7.7 de l'Article 7.	Information regarding: [ X ] Notice received under § 6.1, or [ ] Notice treated as a submission under § 6.1 in accordance with § 7.7 of Article 7.	Información relativa a: [ X ] Notificación recibida con arreglo al § 6.1, o [ ] Notificación tramitada como una presentación con arreglo al § 6.1 de conformidad con el § 7.7 del Artículo 7.
Examinés et publiés conformément aux dispositions suivantes de l'Article 6: [ X ] Assignations examinées au titre des § 6.3, 6.5 et 6.6 et publiées au titre du § 6.7. [ X ] Assignations examinées au titre du § 6.3 et retournées à l'administration notificatrice au titre du § 6.4.	Examined and published in accordance with the following provisions of Article 6: [ X ] Assignments examined under § 6.3, § 6.5 and § 6.6, and published under § 6.7. [ X ] Assignments examined under § 6.3 and returned to the notifying administration under § 6.4.	Examinada y publicada de conformidad con las siguientes disposiciones del Artículo 6: [ X ] Asignaciones examinadas con arreglo al § 6.3, § 6.5 y § 6.6 y publicadas con arreglo al § 6.7. [ X ] Asignaciones examinadas con arreglo al § 6.3 y devueltas a la administración notificante con arreglo al § 6.4.

DATE LIMITE POUR LA RÉCEPTION DES COMMENTAIRES :  
EXPIRY DATE FOR THE RECEIPT OF COMMENTS :  
FECHA LÍMITE PARA LA RECEPCIÓN DE LOS COMENTARIOS :

**04.02.2023**

It's advisable to send comments before this date

# Publication – Part A

- By the end of the publication of a Part A you can find the coordination requirement. If your administration is listed in the coordination requirement, you need to comment!

Format of identifications for submissions received before WRC-19

Administrations et/ou réseaux à satellite affectés / Affected administrations and/or satellite networks / Administraciones y/o redes de satélite afectadas / 受影响的主管部门和/或卫星网络 / Затронутые администрации и/или спутниковые сети / أُو الشبكات الساتلية المتأثرة بالإدارات و

AS Coordinates	A1f1 Notif. adm.	A1f3 Inter. sat. org.	BR80 Status of identified network	A1a Sat. Network / A1b Plan beam identification	BR6a Id. no.	A4a1 Orbital long.	BR79 Max. degradation	
App.30B, Art.6, § 6.5 - Annex 4 App.30B, Art.6, § 6.5 - Annex 4 App.30B, Art.6, § 6.5 - Annex 4 附录30B, 第6条, 第6.5段-附件4 Приложение 30B, Ст. 6, п. 6.5 - Дополнение 4 التعليل 30B, المادة 6, الفقرة 6.5 - الملحق 4								
52.1 (6/4 GHz)	AGO		Allotment	ATG00000	90558014	77.7 W	3.392	
	BLE		Allotment	BLE00000	90558034	90.8 W	3.113	
	CPV		Allotment	CPV00000	90558097	89.7 W	27.411	
	CUB		Allotment	CUB00000	90558060	80.6 W	11.014	
	DOM		Allotment	DOM00000	90558071	85.4 W	28.601	
	F		Pending	F-SAT-30B-88W	114559011	88 W	1.239	
			Pending	F-SAT-B-30B-88W	113559039	88 W	1.193	
	IND		Allotment	IND00000	90558099	76.2 W	4.759	
	NOL		Pending	NSS-FSS 83W	116559019	83 W	3.274	
			Pending	NSS-FSS 87W	116559018	87 W	6.459	
	HTI		Allotment	HTI00000	90558102	92 W	2.613	
	ROA		Allotment	ROA00000	90558177	88.8 W	8.137	
	NOG		Allotment	NOG00000	90558149	84.4 W	35.683	
			Pending	NICASAT-1-30B	113559017	84.4 W	29.375	
	PRG		Pending	PRG-FSSAT-FSS-88W	113559028	88 W	1.243	
	PRR		Allotment	PRR00000	90558165	79.2 W	6.732	
	PRG		Allotment	PRG00000	90558168	81.5 W	16.487	
	PRU		Allotment	PRU00000	90558169	89.9 W	6.817	
	RUS	IK		Pending	IK-87W-F	111559042	87 W	6.775
			Pending	INTBRSPUTNIK-87W-F	111559027	87 W	6.775	
	EUR		Allotment	EUR00000	90558193	77 W	3.131	
	IRG		Allotment	IRG00000	90558208	86.1 W	24.133	
	VCT		Allotment	VCT00000	90558214	93.1 W	1.415	
	VEN		Allotment	VEN00001	90558215	82.7 W	24.191	
			Allotment	VEN00002	90558216	82.7 W	28.949	
	52.1 (13/10-11 GHz)	ATG		Allotment	ATG00000	90558014	77.7 W	3.392
		CPV		Allotment	CPV00000	90558097	89.7 W	27.411
DOM			Allotment	DOM00000	90558071	85.4 W	28.601	
NOL			Pending	NSS-FSS 83W	116559018	83 W	3.274	
HTI			Allotment	HTI00000	90558102	92 W	2.613	
ROA			Allotment	ROA00000	90558177	88.8 W	7.028	
NOG			Allotment	NOG00000	90558149	84.4 W	37.734	
			Pending	NICASAT-1-30B	113559017	84.4 W	31.771	
PRG			Allotment	PRG00000	90558168	81.5 W	1.821	
RUS		IK		Pending	IK-87W-F	111559042	87 W	3.715
			Pending	INTBRSPUTNIK-87W-F	111559027	87 W	3.715	
EUR			Allotment	EUR00000	90558193	77 W	3.641	

Format of identifications for submissions received after WRC-19

FREQUENCY BAND	A1F1 NOTIF. ADM.	A1F3 INTER. SAT. ORG.	BR80 STATUS OF IDENTIFIED NETWORK	A1A SAT. NETWORK / A1B PLAN BEAM IDENTIFICATION	BR6A ID. NO.	A4A1 ORBITAL LONG.	BR79 MAX. C/I DEGRADATION			MAX. PFD EXCESS	
							\$2.1a	\$2.1b	\$2.1c	\$2.2a	\$2.2b
App.30B, Art.6, § 6.5 - Annex 4											
6/4	AUT		Allotment	AUT00000	90558021	11.4 W	5	6	7	1	
6/4	BDI		Allotment	BDI00000	90558027	3.5 W	4		13		31
12-13/10-11	BDI		Allotment	BDI00000	90558027	3.5 W		3			8
12-13/10-11	CHN		List	CHINASAT-30B-8.5W	112559033	8.5 W	10	11		N/A	N/A
12-13/10-11	CHN		Pending	ASAI SAT-120E-A	115559002	120.0E	13				22
12-13/10-11	COG		Allotment	COG00000	90558055	16.35 W			12		2



# Publication – Part B



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS  
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION  
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RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE		<b>BULSAT-30B-1.9E</b>		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º	<b>AP30B/A6B/187</b>
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	<b>BUL</b>	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	<b>1.9 E</b>	BR IFIC / DATE BR IFIC / DATE BR IFIC/ FECHA	<b>2981 / 04.10.2022</b>
NOTIFIÉ AU NOM DE NOTIFIED ON BEHALF OF NOTIFICADA EN NOMBRE DE				NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	<b>114559025</b>
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL					<b>28.04.2022</b>

Publication au titre des dispositions de l'Article 6 de l'Appendice 30B du Règlement des radiocommunications	Publication under provisions of Article 6 of Appendix 30B to the Radio Regulations	Publicación con arreglo a las disposiciones del Artículo 6 del Apéndice 30B del Reglamento de Radiocomunicaciones
Renseignements concernant la fiche de notification reçue au titre du § 6.17, examinés et publiés conformément à l'une des dispositions suivantes de l'Article 6:	Information regarding the notice received under § 6.17, examined and published in accordance with one of the following provisions of Article 6:	Información relativa a las notificaciones recibidas con arreglo al § 6.17, examinadas y publicadas de conformidad con una de las siguientes disposiciones del Artículo 6:
<input checked="" type="checkbox"/> Fiche de notification examinée au titre des § 6.19, 6.21 et 6.22, assignations correspondantes inscrites dans la Liste et publiées au titre du § 6.23. <input type="checkbox"/> Fiche de notification examinée au titre du § 6.19 et retournée à l'administration notificatrice au titre du § 6.20. <input type="checkbox"/> Fiche de notification examinée au titre des § 6.21 et 6.22 et retournée à l'administration notificatrice au titre du § 6.24. <input type="checkbox"/> Fiche de notification retournée au titre du § 6.24, soumise à nouveau, et assignations correspondantes inscrites provisoirement dans la Liste au titre du § 6.25.	<input checked="" type="checkbox"/> Notice examined under § 6.19, § 6.21 and § 6.22, corresponding assignments entered in the List and published under § 6.23. <input type="checkbox"/> Notice examined under § 6.19 and returned to the notifying administration under § 6.20. <input type="checkbox"/> Notice examined under § 6.21 and § 6.22 and returned to the notifying administration under § 6.24. <input type="checkbox"/> Notice returned under § 6.24, resubmitted, and corresponding assignments provisionally entered in the List under § 6.25.	<input checked="" type="checkbox"/> Notificación examinada con arreglo al § 6.19, § 6.21 y § 6.22 y asignaciones correspondientes inscrites en la Lista y publicadas con arreglo al § 6.23. <input type="checkbox"/> Notificación examinada con arreglo al § 6.19 y devueltas a la administración notificante con arreglo al § 6.20. <input type="checkbox"/> Notificación examinada con arreglo al § 6.21 y § 6.22 y devueltas a la administración notificante con arreglo al § 6.24. <input type="checkbox"/> Notificación devuelta con arreglo al § 6.24, presentada de nuevo y asignaciones correspondientes inscrites provisionalmente en la Lista con arreglo al § 6.25.
<input type="checkbox"/> Assignation figurant dans la Liste et dont la zone de service a été modifiée au titre du § 6.16	<input type="checkbox"/> Assignment in the List and whose service area has been modified under § 6.16	<input type="checkbox"/> Asignación que figura en la Lista y cuya área de servicio ha sido modificada con arreglo al § 6.16
<input type="checkbox"/> Assignation annulée dans la Liste et allotissement réintégré dans le Plan de l'Appendice 30B au titre des § 6.33 a), 6.33 b) et 6.33 c).	<input type="checkbox"/> Assignment cancelled from the List and allotment reinstated in the Appendix 30B Plan under § 6.33 a) § 6.33 b) and § 6.33 c).	<input type="checkbox"/> Asignaciones canceladas de la Lista y adjudicación reincorporada en el Plan del Apéndice 30B con arreglo al § 6.33 a) § 6.33 b) y § 6.33 c).
<input type="checkbox"/> Allotissement inscrit dans le Plan de l'Appendice 30B au titre du § 6.35 conformément à une décision de la CMR.	<input type="checkbox"/> Allotment entered in the Appendix 30B Plan under § 6.35 according to a WRC decision.	<input type="checkbox"/> Adjudicación inscrita en el Plan del Apéndice 30B con arreglo al § 6.35 de acuerdo con una decisión de la CMR.

# Publication – Part I-S



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS  
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION  
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RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE	<b>NEW DAWN FSS-3</b>		PARTIE PART PARTE	<b>I-S</b>
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA	---		BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA	<b>2980 / 20.09.2022</b>
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	<b>PNG</b>	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	<b>62 E</b>	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL				<b>18.03.2022</b>

Notifications reçues au titre de		Notifications received under		Notificaciones recibidas en virtud de lo dispuesto en	
	Article 11 du Règlement des radiocommunications		Article 11 of the Radio Regulations		Artículo 11 del Reglamento de Radiocomunicaciones
	Article 5 des Appendices 30 et/ou 30A		Article 5 of Appendices 30 and/or 30A		Artículo 5 de los Apéndices 30 y/o 30A
X	Article 8 de l'Appendice 30B	X	Article 8 of Appendix 30B	X	Artículo 8 del Apéndice 30B

Pour plus d'informations sur les dispositions réglementaires et l'explication des codes ou symboles utilisés dans cette publication, veuillez consulter la <a href="#">Préface</a> .	For more details on the regulatory provisions and the explanation of the codes or symbols used in this publication, please consult the <a href="#">Preface</a> .	Para más detalles sobre las disposiciones reglamentarias y la explicación de los códigos o símbolos utilizados en esta publicación, sírvase consultar el <a href="#">Prefacio</a> .
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# Publication – Part II-S



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS  
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION  
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RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE		<b>NEW DAWN FSS-3</b>		PARTIE PART PARTE	<b>II-S</b>
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA		---		BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA	<b>2980 / 20.09.2022</b>
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	<b>PNG</b>	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	<b>62 E</b>	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	<b>122570011</b>
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL					<b>18.03.2022</b>

Assignations de fréquence inscrites dans le Fichier de référence au titre de		Frequency assignments recorded in the Master Register under		Asignaciones de frecuencia inscrites en el Registro con arreglo al título de	
	Article 11 du Règlement des radiocommunications		Article 11 of the Radio Regulations		Artículo 11 del Reglamento de Radiocomunicaciones
	Article 5 des Appendices 30 et/ou 30A		Article 5 of Appendices 30 and/or 30A		Artículo 5 de los Apéndices 30 y/o 30A
X	Article 8 de l'Appendice 30B	X	Article 8 of Appendix 30B	X	Artículo 8 del Apéndice 30B

Pour plus d'informations sur les dispositions réglementaires et l'explication des codes ou symboles utilisés dans cette publication, veuillez consulter la <a href="#">Préface</a> .	For more details on the regulatory provisions and the explanation of the codes or symbols used in this publication, please consult the <a href="#">Preface</a> .	Para más detalles sobre las disposiciones reglamentarias y la explicación de los códigos o símbolos utilizados en esta publicación, sírvase consultar el <a href="#">Prefacio</a> .
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# Publication – Part III-S



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS  
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION  
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UNIÓN INTERNACIONAL DE TELECOMUNICACIONES  
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RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE		<b>LUX-30B-6</b>		PARTIE PART PARTE	<b>III-S</b>
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA		---		BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA	<b>2616 / 01.04.2008</b>
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	<b>LUX</b>	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	<b>23.5 E</b>	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	<b>107512019 / 107500175</b>
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL					<b>24.03.2007</b>

Frequency assignments returned to the notifying Administration under / Assignations de fréquence retournées à l'administration notificatrice au titre de / Asignaciones de frecuencia devueltas a la Administración notificante en virtud del	
	Article 11 du Règlement des radiocommunications / Article 11 of the Radio Regulations / Artículo 11 del Reglamento de Radiocomunicaciones
	Article 5 des Appendices 30 et/ou 30A / Article 5 of Appendices 30 and/or 30A / Artículo 5 de los Apéndices 30 y/o 30A
<b>X</b>	Article 8 de l'Appendice 30B / Article 8 of Appendix 30B / Artículo 8 del Apéndice 30B

Pour plus d'informations sur les dispositions réglementaires et l'explication des codes ou symboles utilisés dans cette publication, veuillez consulter la <a href="#">Préface</a>	For more details on the regulatory provisions and the explanation of the codes or symbols used in this publication, please consult the <a href="#">Preface</a> .	Para más detalles sobre las disposiciones reglamentarias y la explicación de los códigos o símbolos utilizados en esta publicación, sírvase consultar el <a href="#">Prefacio</a> .
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# Annex 2

# How to prepare an SNS database?

Creating a new notice through SpaceCap

The screenshot shows the SpaceCapture V9 software interface. The title bar reads "SpaceCapture V9 - [Set Notice Template]". The menu bar includes "File", "Edit", "Tools", "Template", "Window", and "Help". The toolbar contains various icons, with the "PLAN" icon highlighted by a purple box. The main window title is "Start Page - PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)". On the left sidebar, the "New Notice" icon is also highlighted with a purple box. Below the sidebar, there is a "Transaction Id:" field and a "Select a Plan" section with a hand cursor icon. A table displays the following data:

PLAN ID	Description	Notice Count
00DN	WRC-00 BSS Down-link Plan & List for Regions 1 & 3 (Appendix 30)	0
00UP	WRC-00 Feeder-link Plans and Lists for Regions 1 and 3 at 14&17 GHz (Appendix 30A)	0
A30B	WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)	0

The "A30B" row is highlighted with a purple box. At the bottom, there is a checkbox labeled "Plan/List/Pending notices (Status above 01) read-only mode".

# How to prepare an SNS database?

Forms of Notice PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)

Notice | Beam | Strapping | Attachments | Coordinat

Notice Id: 1 Plan WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B) Status 01

Date of Receipt: DD.MM.YYYY Administration Serial Number

A1f1. Notifying Administration  
A1f3. Intergovernmental Satellite

**Notice Submitted under**

- A30B#6.17 Include Assignments in the List
- A30B#6.1A New Additional System
- A30B#6.1C Conversion of Allotment
- A30B#6.1M Modify List assignments
- A30B#6.1T Transfer of 7.2 submission to 6.1
- A30B#6.25 Notice Resubmitted under 6.25
- A30B#6.33B Reinstate Allotment
- A30B#6.33C Reinstated Allotment
- A30B#6.35L Transfer to Allotment
- A30B#6.35P Transfer to Allotment (WRC)
- A30B#7.2 Allotment for New Adm
- RES170#6.17 Include Assignment in the List Res170
- RES170#6.1A New additional system Res170
- RES170#6.1C Conversion of Allotment Res170
- RES170#6.25 Notice resubmitted Res170

A1a. Identity of the Satellite Network  
A4a2. Longitudinal tolerance  
A4a2c. Inclination Excursion

Network has no Beams

Introduce general information about the space station

Forms of Notice PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)

Coordination | Notice | **Beam** | Group | Strapping | Attachments

Notice Id: 1 Satellite Network: Nominal Orbital Longitude: Administration:

**Characteristics of the Beam**

B2.  Receiving Beam  Transmitting Beam

B1a. Beam Designation   B1b. Steerable/ Reconfigurable Beam

Space Station Antenna  
B3c1. Radiation Pattern

B3f2a. Rotation Accuracy  °  
B3f2b. Major Axis Orientation  °  
B3f2. Axis at half-power beamwidth  ° c. Major  ° d. Minor

C12a. Minimum acceptable aggregate carrier-to-interference ratio

B3f1. Boresight  
Longitude  ° E Latitude  ° N

Introduce information describing the beam

# How to prepare an SNS database?

Introduce information concerning the emitted power

Forms of Notice PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)

Strapping Attachments Coordination  
Notice Beam **Group** Emissions/Frequencies Srv Area/Typical Antenna

Notice 1 Satellite Network: AFS Beam Id TX E Group Id: 1 Split Grp Id:

**Characteristics Common to a Group of Frequencies**

C3a. Assigned frequency bandwidth (kHz)

C4a. Class of Station

C1. Frequency Range

- Frequency Band 4500 - 4800 MHz
- Frequency Bands 10.70 - 10.95 GHz, 11.20 - 11.45 GHz
- Lower Frequency Band 10.70 - 10.95 GHz
- Upper Frequency Band 11.20 - 11.45 GHz

BR Data

Remarks

Introduce frequency information

Forms of Notice PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)

Strapping Attachments Coordination  
Notice Beam Group **Emissions/Frequencies** Srv Area/Typ

Notice 1 Satellite Network: AFS Beam Id TX E Group Id: 1 Split Grp Id:

**Characteristics Common to a Group of Frequencies**

C3a. Assigned frequency bandwidth (kHz)

C4a. Class of Station

C1. Frequency Range

- Frequency Band 4500 - 4800 MHz
- Frequency Bands 10.70 - 10.95 GHz, 11.20 - 11.45 GHz
- Lower Frequency Band 10.70 - 10.95 GHz
- Upper Frequency Band 11.20 - 11.45 GHz

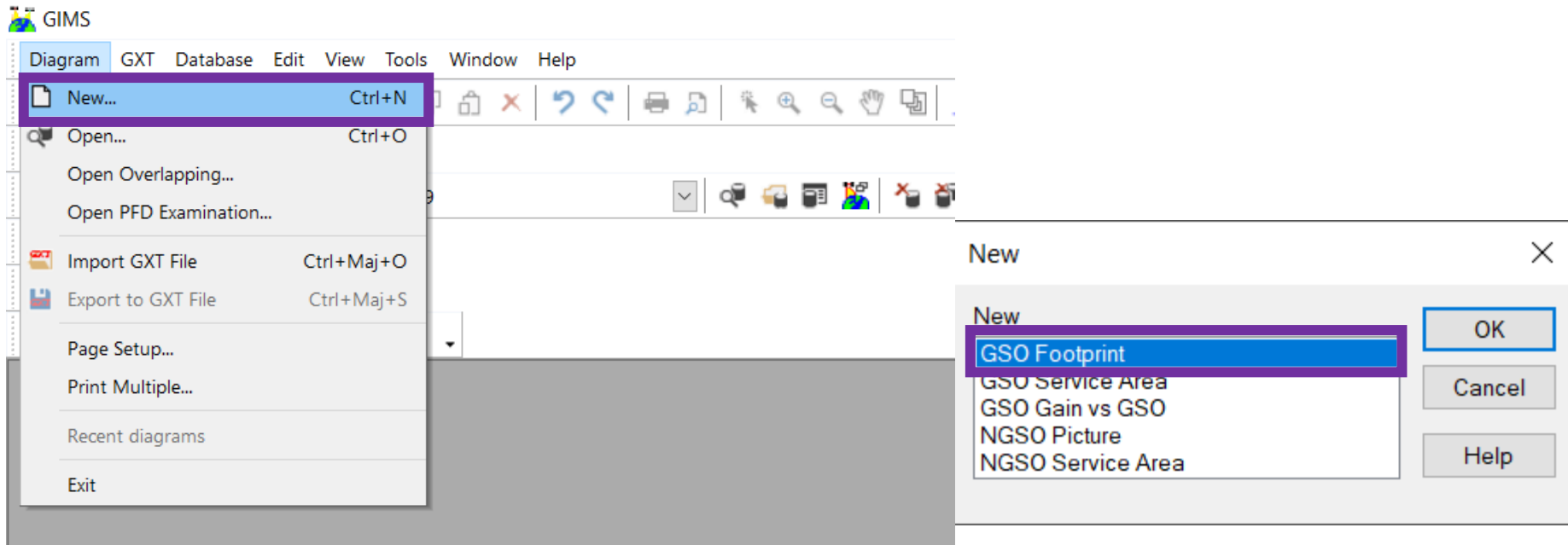
# How to prepare an SNS database?

Introduce information concerning the Earth station and service area

Introduce information concerning the connection between uplink and downlink (strapping). Use the Link Wizard for Article 6

# How to prepare a Gims database?

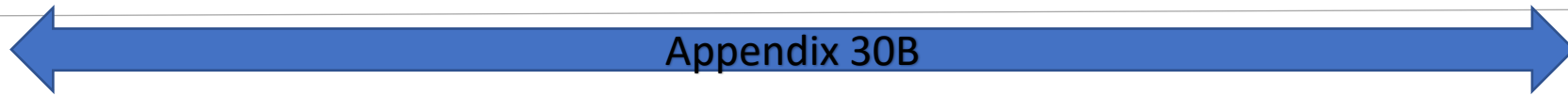
Creating a set of diagram in GMS containing all the satellite gain contours (only co-polar) and the service areas



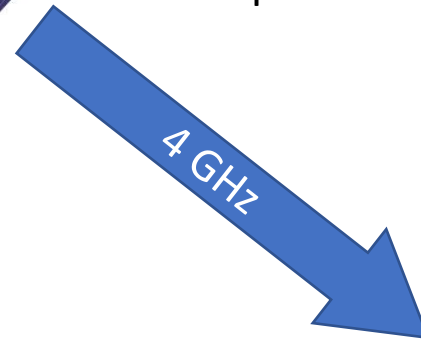
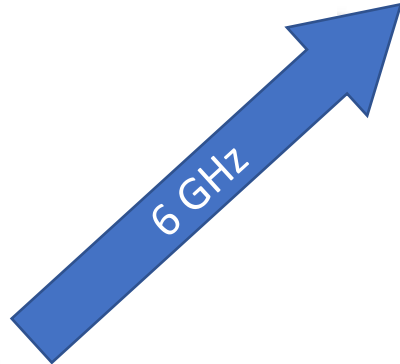


# Example: creation of a notice starting from your Plan allotment

# A complete link



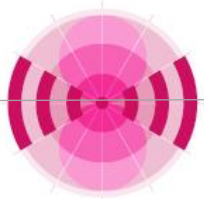
Transmitting:  
EIRP/36 MHz: 33 to 37 dBW  
14 Transponders with two polarizations



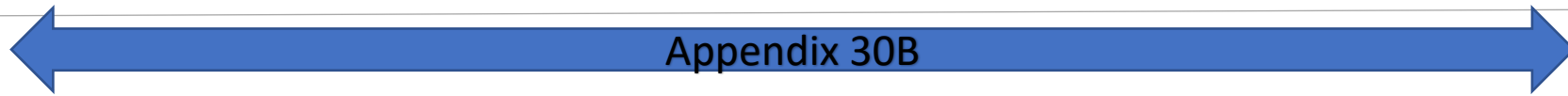
Transmitting:  
5.5 m in 6 GHz  
EIRP/36MHz: 65 to 74 dBW



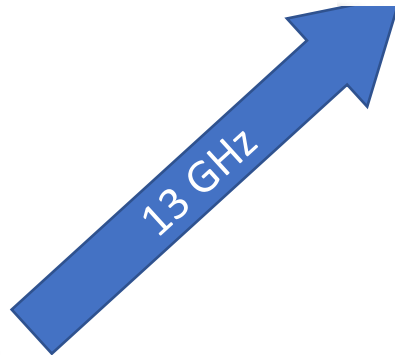
Receiving:  
5.5 m in 4 GHz  
Availability: 99.95%  
of the year



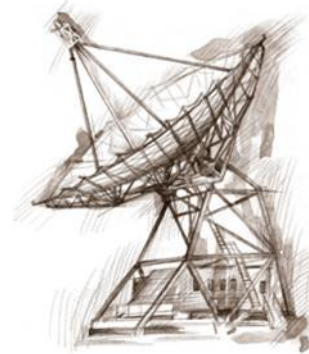
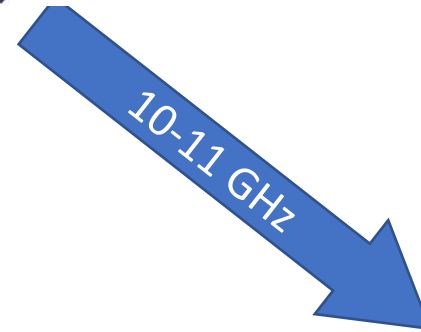
# A complete link



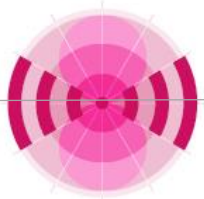
Transmitting:  
EIRP/36 MHz: 45 to 53 dBW  
24 Transponders with two polarizations



Transmitting:  
2.7 m in 13 GHz  
EIRP/36MHz: 70 to 88 dBW



Receiving:  
2.7 m in 10-11 GHz  
Availability: 99.9% of the year



# Steps to do for each beam

1. Use **SpaceCap** to export your Plan in **30B\_2981** database into a single database; name it **ADM\_30B\_Plan\_Mod.mdb**
2. Select an orbital position
3. Determine the satellite transmitting beam characteristics in **GIMS** from the selected orbital position
4. Define a service area
5. Open the single database (**ADM\_30B\_Plan\_Mod.mdb**) with **SpaceCap** to change the transmitting beam characteristics
6. Select test points and copy them in **ADM\_30B\_Plan\_Mod.mdb**
7. Create one more group by cloning the previous group if you want more size of antennae for example
8. Run **BrSis Validation** to validate the new submission
9. Submit to the Radiocommunication Bureau through e-submission

# 1. Use SpaceCap to export your Plan in 30B\_2981 database into a single database; name it ADM\_30B\_Plan\_Mod.mdb

- Open **SpaceCap** from **SAM**
- From "**File**" menu, Open **30B\_IFIC2981 database**
- Select "**Plan**" tab
- Double click on the fourth row to open Ap30B Plan (**A30B**)
- Select "**Search**" and enter your country code to find your Plan entry
- Select "**Export**" to export your Plan entry into a single database (put it in **C:\Temp**)

The screenshot shows the SpaceCapture v9.0.3426 application window. The main window title is "SpaceCapture v9.0.3426 - [Set Notice Template]". The menu bar includes File, Edit, Tools, Template, Window, and Help. The toolbar contains various icons for file operations and navigation. The main area is titled "Notice Explorer PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)". It displays a table with columns: Notice id, Type, Adm./Org., Orb. Pos., Station name, Date rcv., and Status. A single row is selected, showing Notice id 090558040, Type G, Adm./Org. BTN/, Orb. Pos. 59.1E, Station name BTN00000, Date rcv. 16.03.1990, and Status 50. A dialog box is open in the foreground, titled "Target Database". It has the following options:

- Target Database:  Access,  Ingres. Path: C:\Temp\BTN\_30B\_Plan\_Mod.mdb. Button: Set Target Db.
- Keep History: . Keep Findings and Reference Situation: . Export notices with same Network Package id: .
- Group Ids:  Renumber Group Ids,  Keep Group Ids of the source.
- Notice Already in Target database:  Give a new Notice Id,  Replace Notice in Target,  Do not export.
- Export:  Run Export now,  Schedule Export to run later.

Buttons: OK, Cancel.

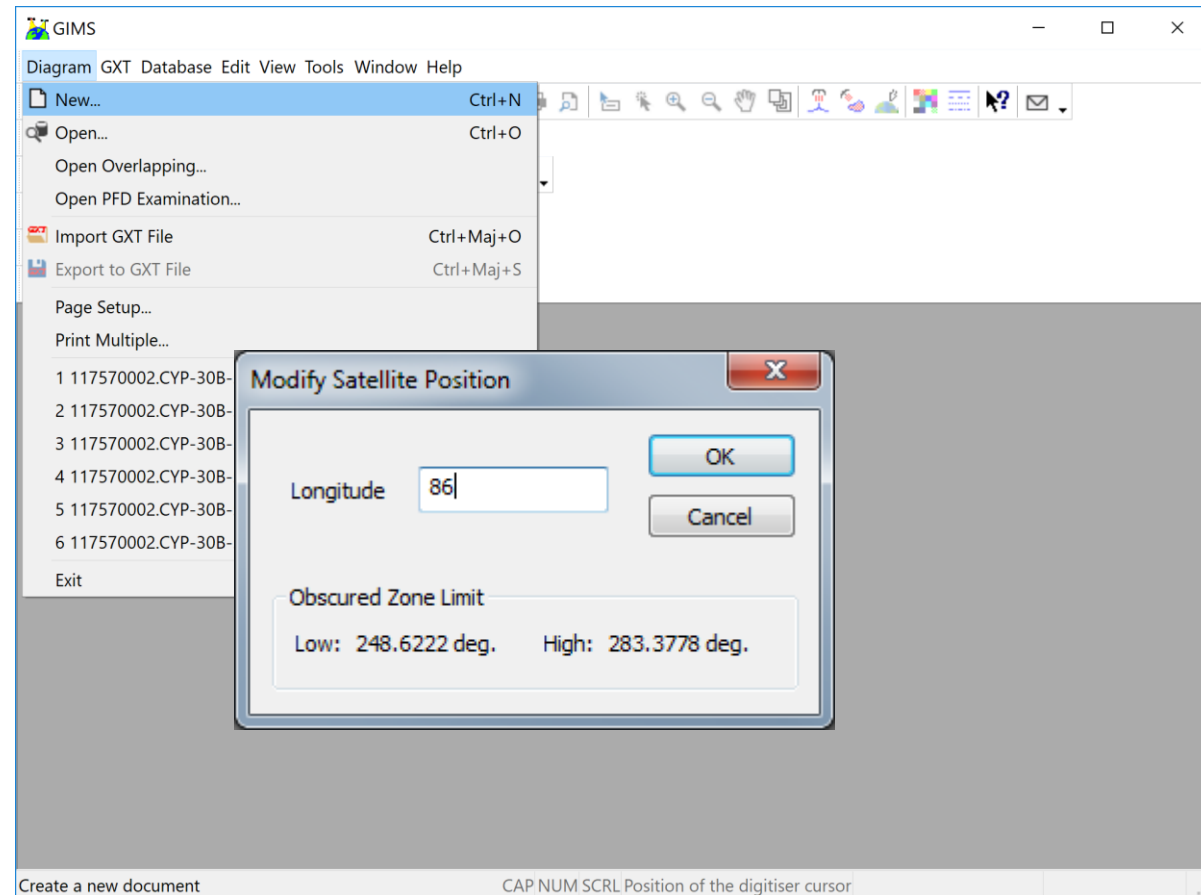
At the bottom of the application window, there is a status bar with the following information: Current DB : C:\AP30B\07\_Data 30B\30B\_2981.mdb, Plan Id A30B, Status above 01 Read Only, Connected Ref, 10:08 AM, 07.10.2022.

## 2. Select an orbital position

- For this exercise, let's select the orbital position **86° East**.
- You may keep as well the same orbital position and modify only other parameters

### 3. Create a diagram in the GIMS from the selected orbital position (1)

- Open **GIMS** from **SAM**
- You need to create a local GIMS database.
- From “**Diagram**” menu, Select “**New**” and then “**Footprint**”
- Enter “**86**” and click “**OK**”



### 3. Create a diagram in the GIMS from the selected orbital position (2)

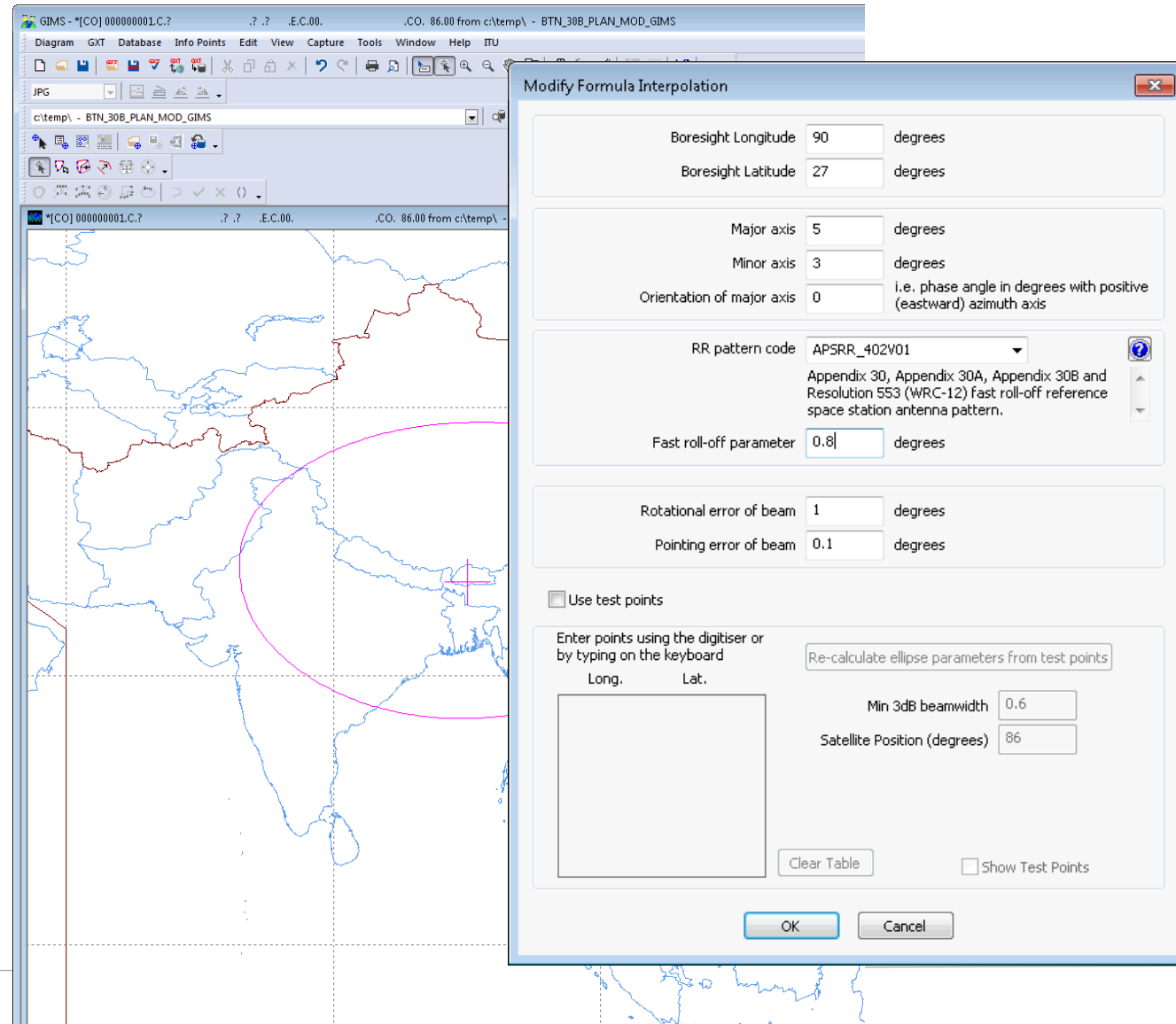
To capture an elliptical beam, you click on

- Capture
- -3dB ellipse

And you insert the data that characterise the ellipsis.

You need to save the diagram in your local GIMS database.

Repeat this step for all the beams of your network, up link, downlink, C-band, Ku-band



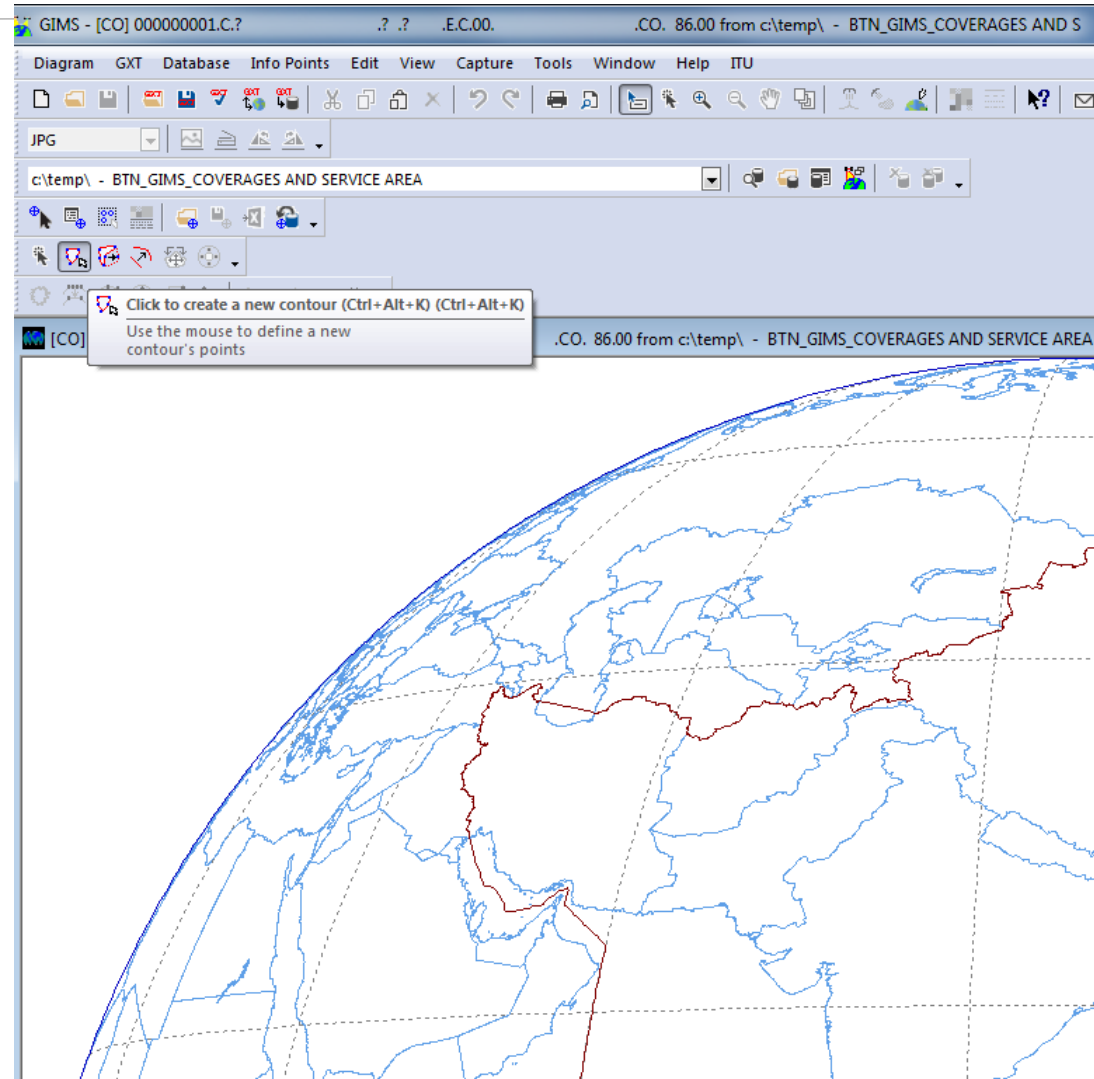
The screenshot shows the GIMS software interface with a map of Asia. A pink elliptical beam is overlaid on the map. A dialog box titled "Modify Formula Interpolation" is open, showing the following parameters:

Parameter	Value	Unit
Boresight Longitude	90	degrees
Boresight Latitude	27	degrees
Major axis	5	degrees
Minor axis	3	degrees
Orientation of major axis	0	i.e. phase angle in degrees with positive (eastward) azimuth axis
RR pattern code	APSRR_402V01	
Fast roll-off parameter	0.8	degrees
Rotational error of beam	1	degrees
Pointing error of beam	0.1	degrees
Use test points	<input type="checkbox"/>	
Min 3dB beamwidth	0.6	
Satellite Position (degrees)	86	



### 3. Create a diagram in the GIMS from the selected orbital position (3)

To reproduce shaped beam contours, you can use the « Click to create a new contour » tool. With the mouse you can click on the points of the Earth where the contours pass. Double click to close each contour. You need to save the diagrams in your local GIMS database.

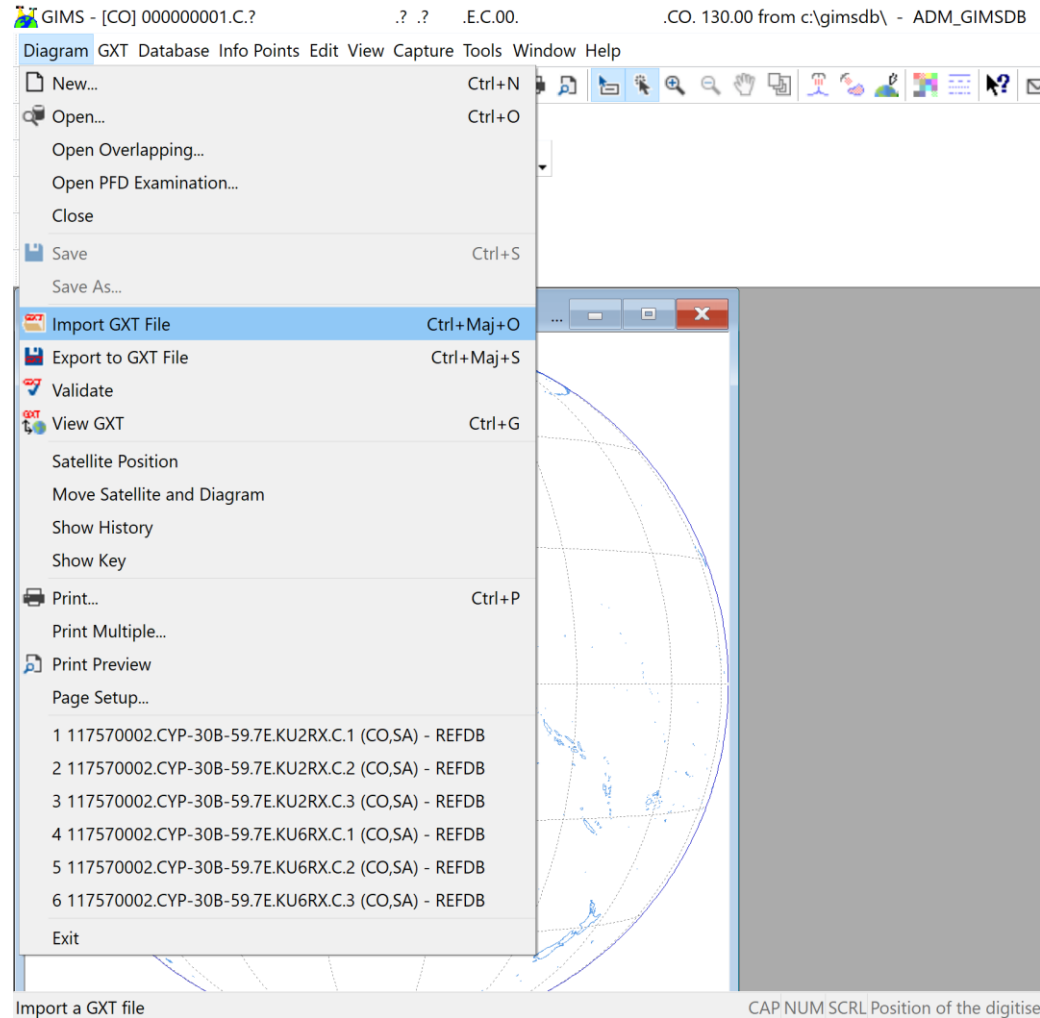


### 3. Create a diagram in the GIMS with the selected orbital position (4)

To import a shaped beam, you click on

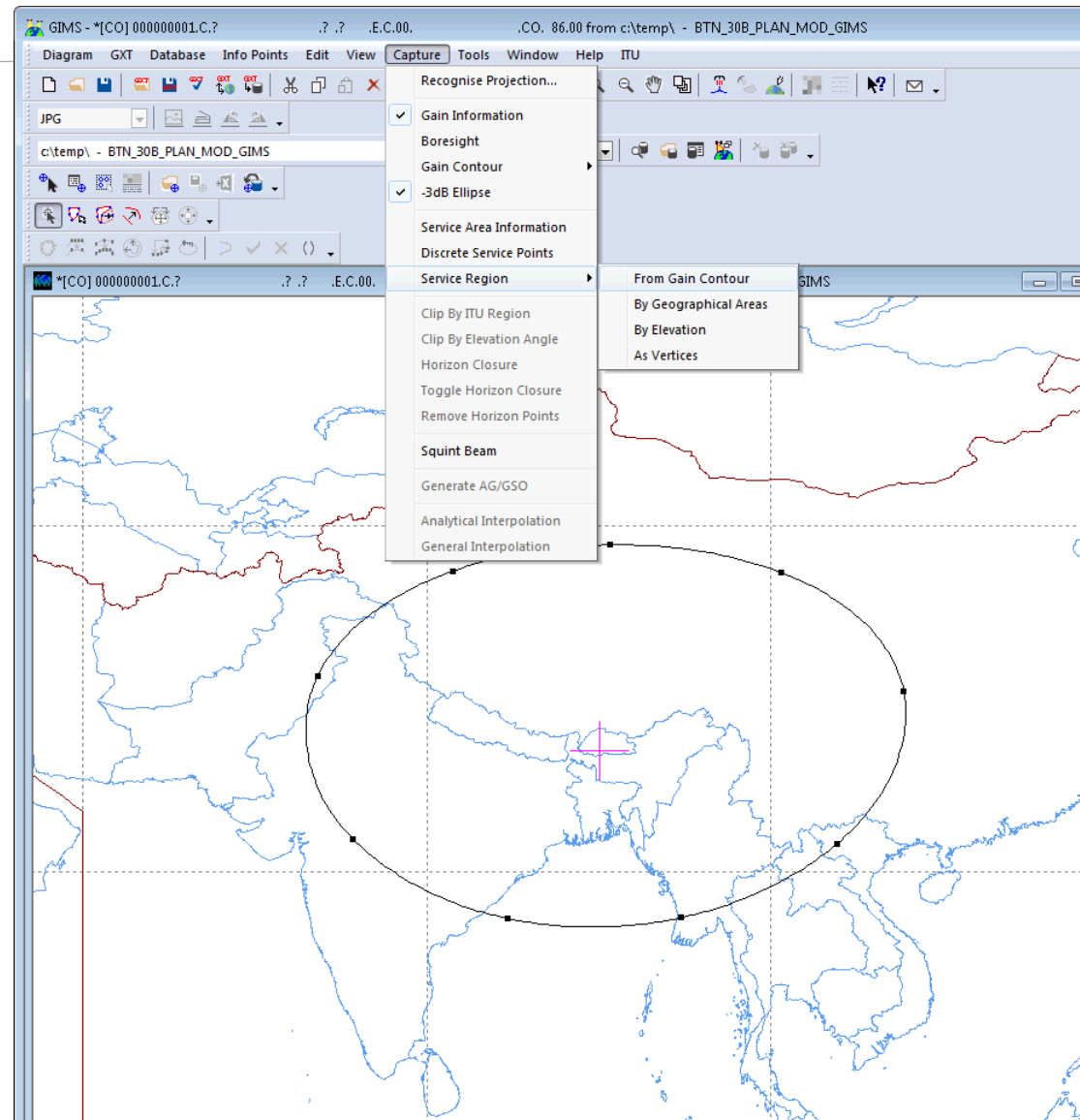
- Diagram
- Import

And you load the file of your shaped beam. You need to save the diagrams in your local GIMS database.



## 4. Define a service area

- Go to GIMS where you created your beam contours and select a service area.
- For example select the gain contour within which you intend to provide services
- Click on «Capture» then «Service region» then «From gain contour»
- Give a name to the service area



## 5. Open the single database (ADM\_30B\_Plan\_Mod.mdb) with SpaceCap to update the beam characteristics

- Open **SpaceCap** from **SAM**
- From “**File**” menu, Open “**ADM\_30B\_Plan\_Mod.mdb**” database
- Select “**Plan/List/Pending**” tab
- Unselect check box “**Plan/List/Pending notices (status above 01) read –only mode**”
- Double click on the fourth row to open AP30B Plan (**A30B**)
- Select the **Notice** and click “**Show**”
- Go to “**Notice**” tab to change the orbital position
- Go to “**Beam**” tab to update the parameters of the elliptical beam you created previously with **GIMS**, or you uncheck “**Elliptical**” to check “**Shaped**” if you created a shaped beam

Notice Id: 90558040 Satellite Network: BTN00000 Nominal Orbital Longitude: 86 Administration: BTN

Characteristics of the Beam

B2.  Receiving Beam  Transmitting Beam

Shape of the Beam  Elliptical  Other Shape

B3d. Pointing Accuracy: 0.1 °

B3a1. Co-polar gain: 32.69 dBi

C12a. Minimum acceptable aggregate carrier-to-interference ratio: [ ]

B1a. Beam Designation: BTN00\_11   B1b. Steerable/Reconfigurable Beam

Space Station Antenna

B3c1. Radiation Pattern: R123FR ==> APSRR\_402V01

B3f2a. Rotation Accuracy: 1 ° Beamlet: 0.8

B3f2b. Major Axis Orientation: 0 °

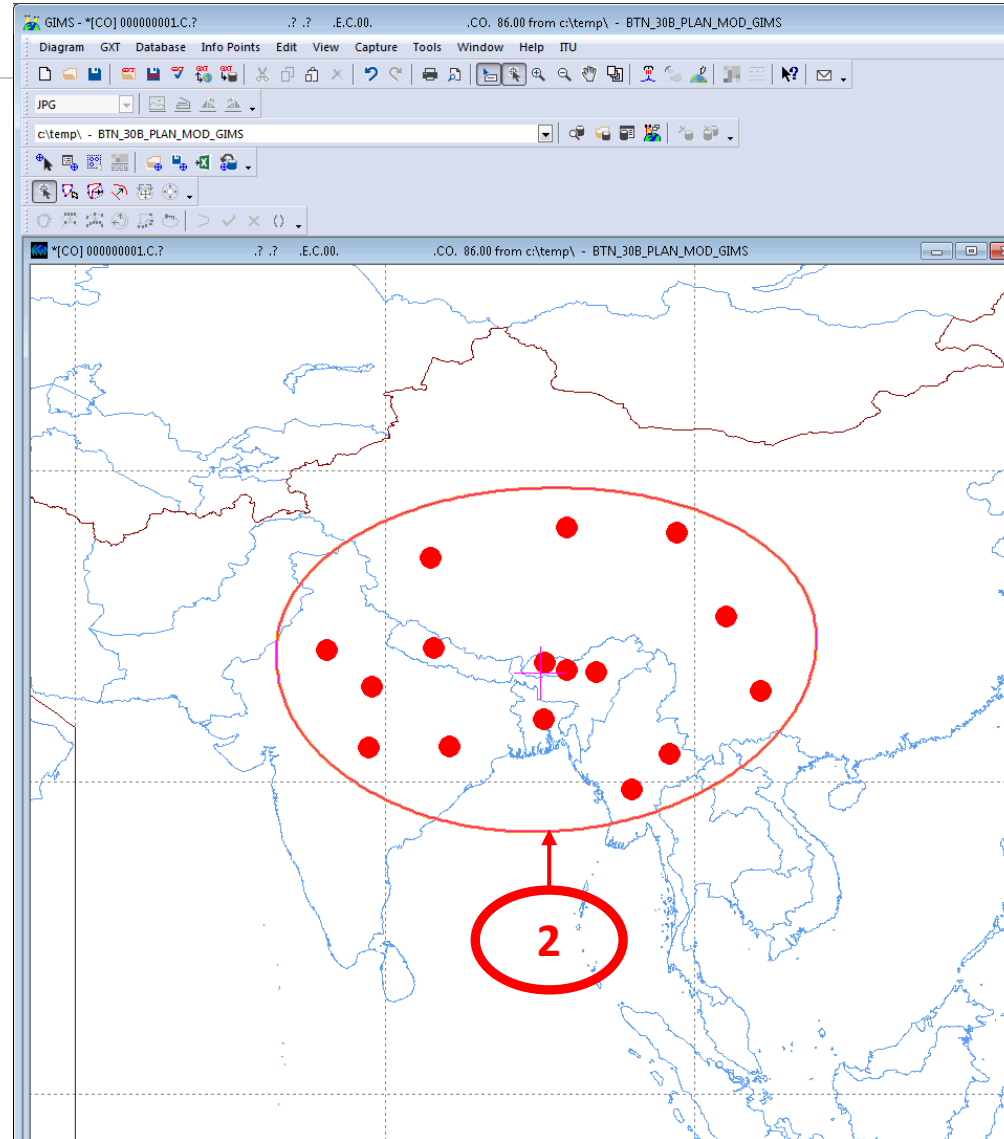
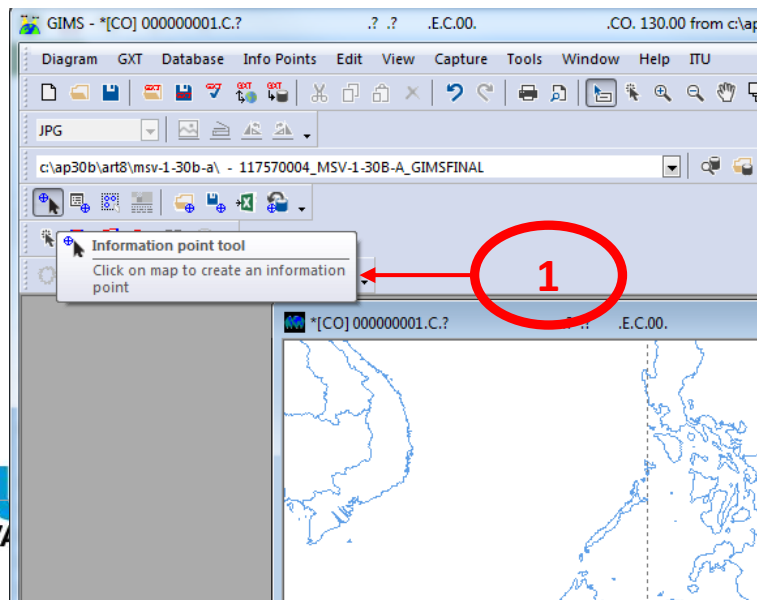
B3f2. Axis at half-power beamwidth: c. Major: 5 ° d. Minor: 3 °

B3f1. Boresight: Longitude: 90 ° E Latitude: 27 ° N

List of Available Groups

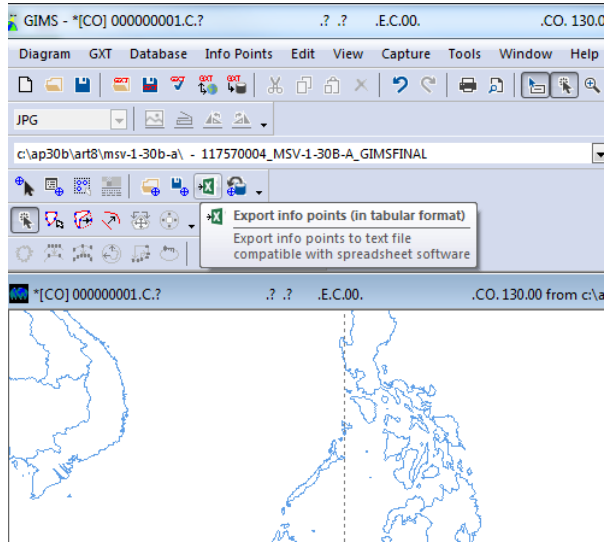
## 6. Select new test points...

- Go to GIMS, open your service area and click on “information point tool” (1)
- With the mouse you click on the area where you want to add the points where the protection of your assignment will be calculated (test-points). They shall be on land and within the service area(2)



## 6. ...and copy them in ADM\_30B\_Plan\_Mod.mdb (1)

- Go to “Export info point” and create a new file in C:\Temp where to store the coordinates of the test-points



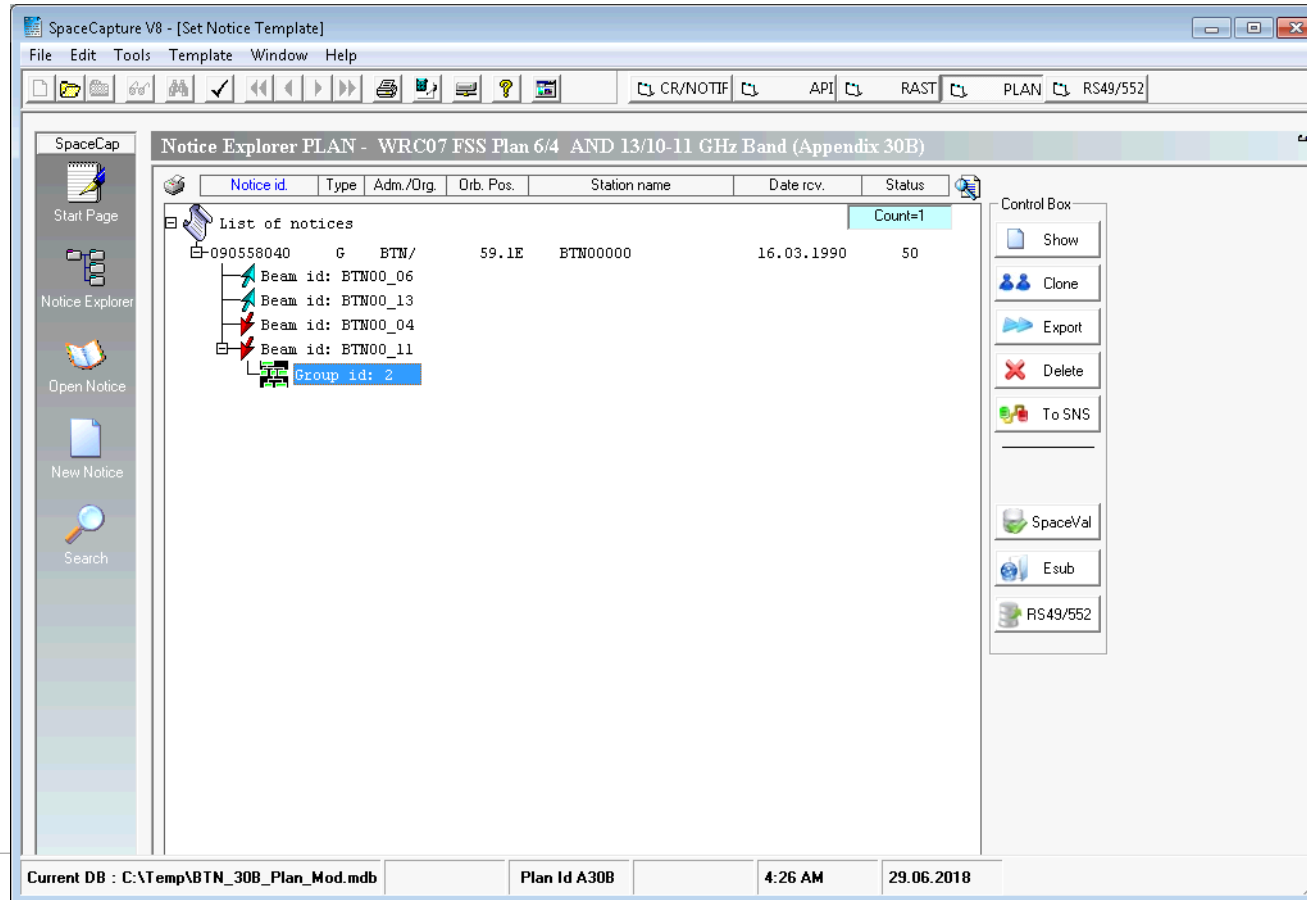
- Copy the two columns containing the test-points coordinates

	A	B	C	D	E	F	G	H	I	J
1	Longitude	Latitude	Title	Earth azim	Earth elev	Gain (dB)	Located ir	PF (dB/V	Space azir	Space el
2	79.1331	26.1341		164.71	58.52	-1.39	IND/IND/XR3		-1.07	4.
3	76.1988	28.4763		160.08	55.05	-2.18	IND/IND/XR3		-1.49	4.7
4	82.9444	34.3696		174.6	49.93	-1.96	CHN/CHN/XR3		-0.43	5.5
5	91.6951	36.377		189.54	47.37	-2.23	CHN/CHN/XR3		0.79	5.8
6	101.976	30.6632		209.31	50.24	-1.74	CHN/CHN/XR3		2.34	5.C
7	104.272	25.839		217.15	53.57	-2.33	CHN/CHN/XR3		2.8	4.E
8	93.5956	27.0676		196.33	57.28	-0.15	IND/IND/XR3		1.18	4.E
9	90.3205	27.6628		189.24	57.35	-0.01	BTN/BTN/XR3		0.67	4.E
10	83.1536	28.5999		174.07	56.49	-0.61	NPL/NPL/XR3		-0.43	4.7
11	91.741	27.2363		192.39	57.56	-0.04	BTN/BTN/XR3		0.89	4.E
12	98.3423	21.8337		210.47	60.85	-1.76	BRM/BRM/XR3		1.99	3.7
13	95.9446	19.5522		207.65	64.41	-2.3	BRM/BRM/XR3		1.64	3.E
14	90.2282	24.0561		190.28	61.46	-0.27	BGD/BGD/XR3		0.68	4.C
15	84.1202	22.2727		175.05	63.83	-1.1	IND/IND/XR3		-0.31	3.E
16	78.9129	22.242		161.82	62.74	-2.2	IND/IND/XR3		-1.15	3.
17	98.8488	35.9986		201.21	46.05	-2.63	CHN/CHN/XR3		1.77	5.7
18										
19										



## 7. Create one more group by cloning the previous group (1)

- From “File” menu, select “Close Notice”
- Double click on the Notice then the Beam for which you need to submit additional earth station, for example, and then select Group\_id, right click the mouse and select “Clone” to create another group.



The screenshot shows the SpaceCapture V8 software interface. The main window is titled "Notice Explorer PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)". The interface includes a menu bar (File, Edit, Tools, Template, Window, Help), a toolbar, and a sidebar with navigation options like Start Page, Notice Explorer, Open Notice, New Notice, and Search.

The central area displays a table of notices with the following columns: Notice id, Type, Adm./Org, Orb. Pos, Station name, Date rcv, and Status. The table contains one row of data:

Notice id	Type	Adm./Org	Orb. Pos	Station name	Date rcv	Status
090558040	G	BTN/	59.1E	BTN00000	16.03.1990	50

Below the table, a tree view shows the structure of the notice, including Beam id: BTN00\_06, Beam id: BTN00\_13, Beam id: BTN00\_04, Beam id: BTN00\_11, and Group id: 2. The Group id: 2 is highlighted in blue.

On the right side, there is a Control Box with several buttons: Show, Clone, Export, Delete, To SNS, SpaceVal, Esub, and RS49/552. The Clone button is highlighted in blue.

The status bar at the bottom shows: Current DB : C:\Temp\BTN\_30B\_Plan\_Mod.mdb, Plan Id A30B, 4:26 AM, 29.06.2018.



## 7. Create one more group by cloning the previous group (2)

- From the current screen, select the newly created group and click “**Show**”
- If the purpose of this additional group is to add a different Earth Station size, go to “Srv Area/Typical Antenna” and insert the new Earth Station maximum gain.

The screenshot shows the SpaceCapture V8 software interface. The main window is titled "Forms of Notice PLAN - WRC07 FSS Plan 6/4 AND 13/10-11 GHz Band (Appendix 30B)". The "Srv Area/Typical Antenna" tab is selected. The interface includes a menu bar (File, Edit, Tools, View, Window, Help), a toolbar, and a status bar at the bottom.

Key fields and controls visible:

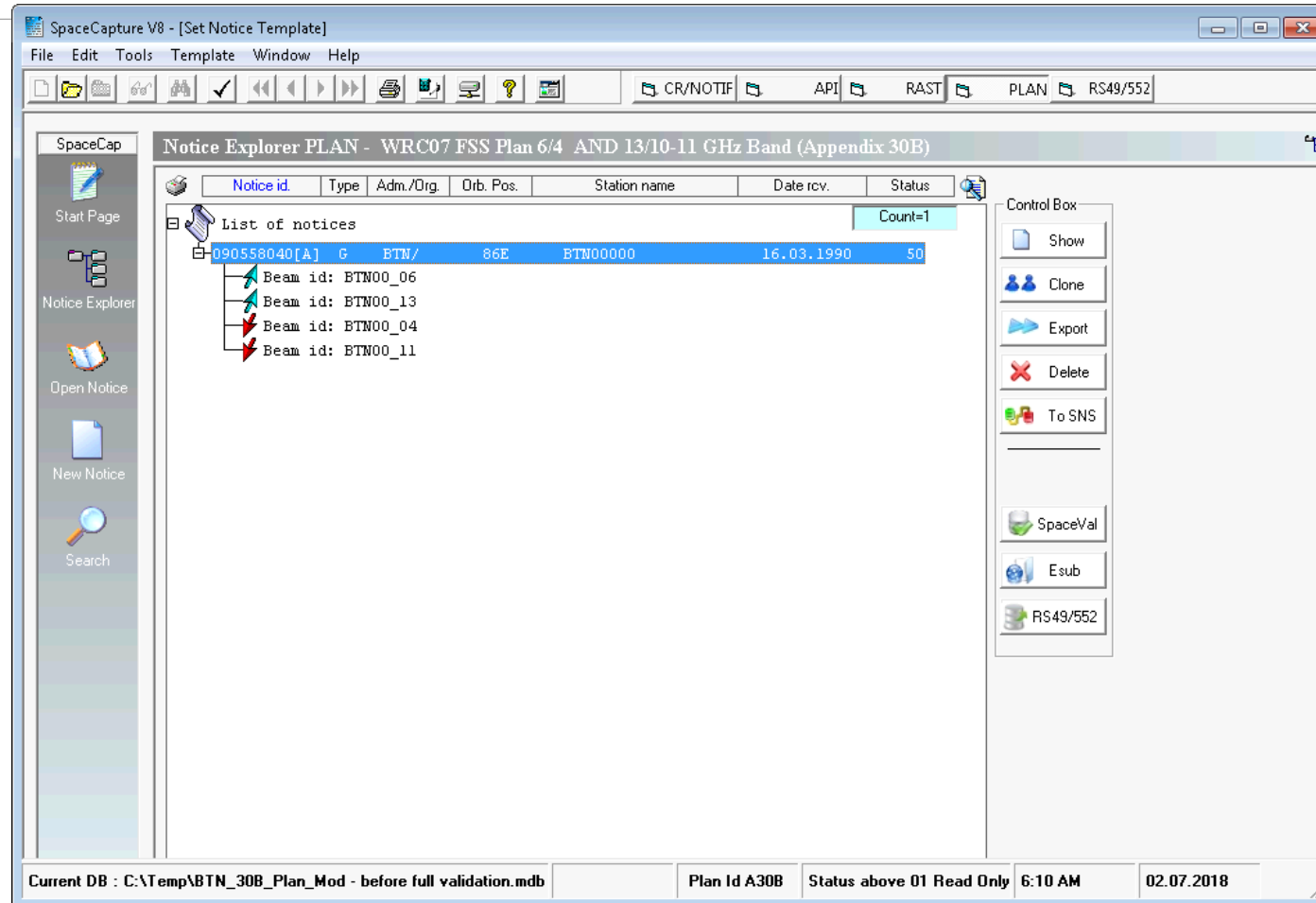
- Notice Id: 90558040, Satellite Network: BTN00000, Beam Id: BTN00\_11 E, Group Id: 5
- Service area contour: C11a1. Service Area No. 1, C11a5e. Minimal Elevation Angle
- Associated Typical Earth Station Antenna Characteristics:
  - C10d5a. Radiation Pattern: APEREC015V01 ==> APEREC015V01
  - C10d3. Maximum Isotropic Gain in dBi: 35.3
  - C10d4. Half-power beamwidth in degrees: [empty]
  - C10d6. Noise Temperature: 125
- Buttons: "Apply these characteristics to all groups in this beam", "Apply these characteristics to the Current Group", "Overwrite Climatic Zones in db with IDWM Climatic Zones"

The "C11a. Test Points (maximum 100)" table is displayed with the following data:

Longitude degrees E	Latitude degrees N	Antenna Altitude (m)	Climatic Zone	C. Zone in db
76.1988	28.4763	0	K	
78.9129	22.2420	0	N	
79.1331	26.1341	0	K	
82.9444	34.3696	0	K	
83.1536	28.5999	0	K	
84.1202	22.2727	0	N	
90.2282	24.0561	0	N	
90.3205	27.6628	0	K	
91.6951	36.3770	0	D	
91.7410	27.2363	0	K	
93.5956	27.0676	0	K	
95.9446	19.5522	0	P	
98.3423	21.8337	0	N	
98.8488	35.9986	0	D	
101.9760	30.6632	0	D	
104.2720	25.8390	0	D	

Status bar information: Current DB : C:\Temp\BTN\_30B\_Plan\_Mod.mdb, Major Axis at the half-power beamwidth (degrees), Plan Id A30B, 4:50 AM, 29.06.2018

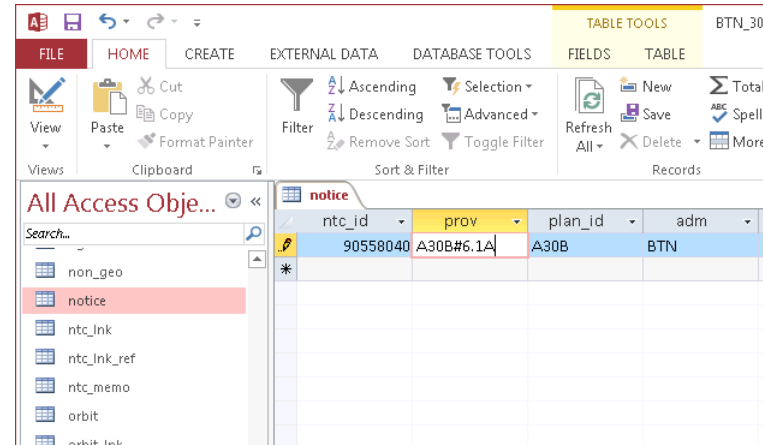
# Repeat the steps 3 to 7 for all the beams of your future implementation



- If, for example, you don't intend to implement the C-band, then you can delete the corresponding beams.

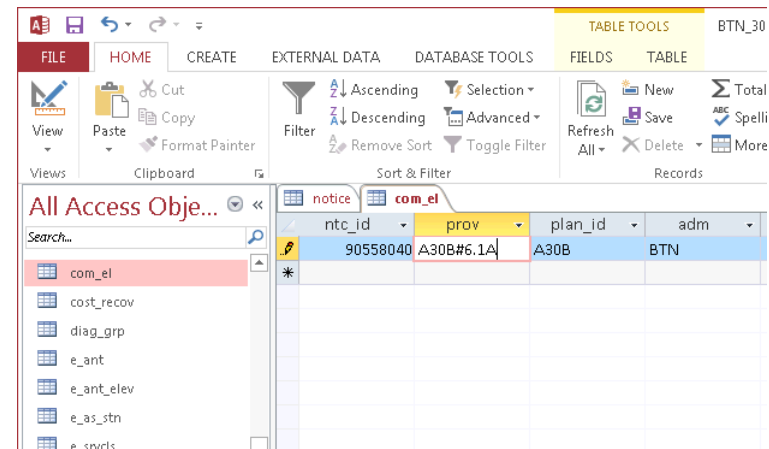
## 8. Run BrSis Validation to validate the new submission (1)

- Open the single database “ADM\_30B\_Plan\_Mod.mdb” with **Ms Access**.
- Open **Notice** table and enter A30B#6.1A to column “prov”.
- Open **Com\_el** table and enter A30B#6.1A to column “prov”.



The screenshot shows the Microsoft Access interface with the 'notice' table open. The table has four columns: ntc\_id, prov, plan\_id, and adm. A single record is visible with the following values:

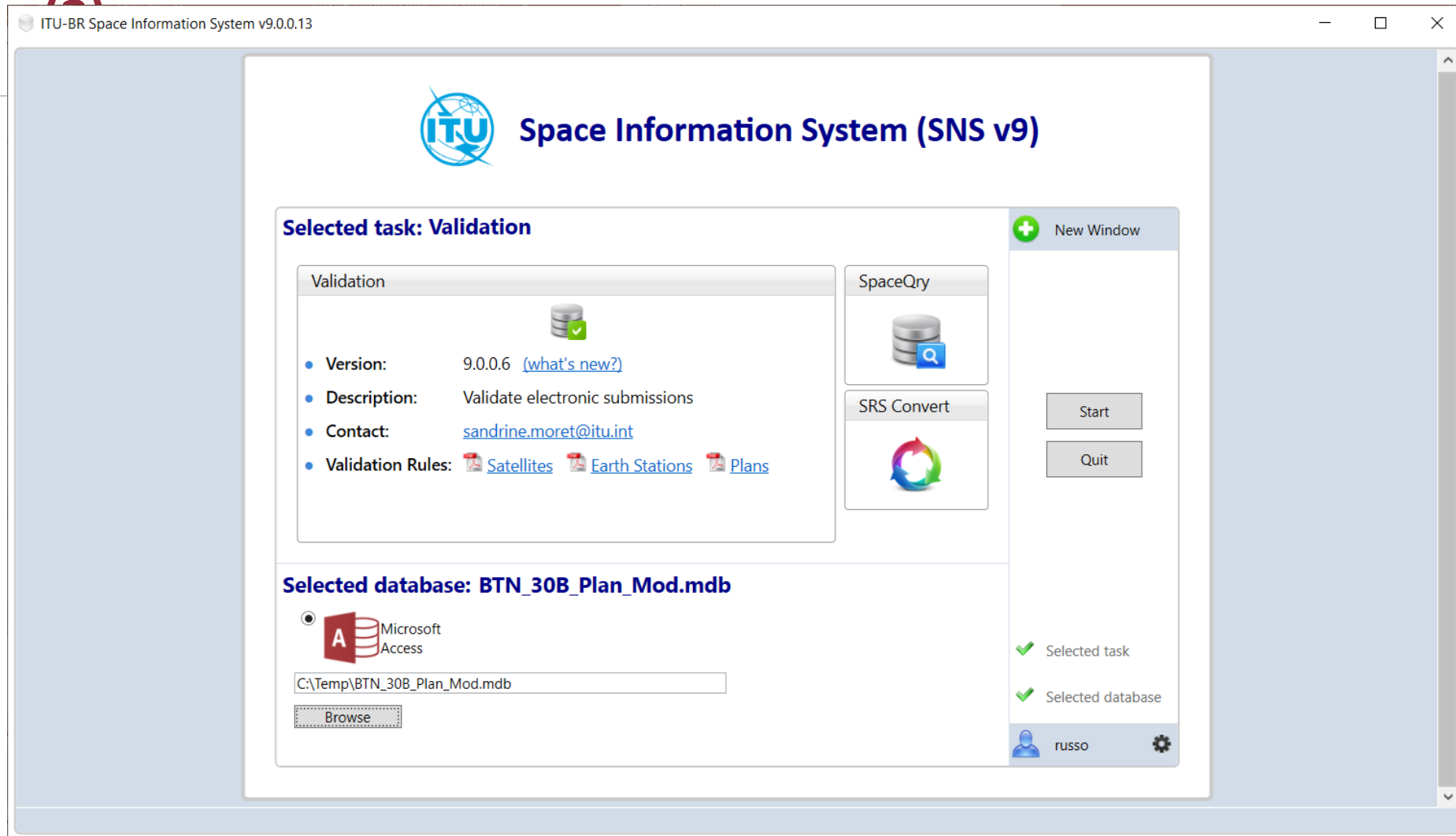
ntc_id	prov	plan_id	adm
90558040	A30B#6.1A	A30B	BTN



The screenshot shows the Microsoft Access interface with the 'com\_el' table open. The table has four columns: ntc\_id, prov, plan\_id, and adm. A single record is visible with the following values:

ntc_id	prov	plan_id	adm
90558040	A30B#6.1A	A30B	BTN

## 8. Run BrSis Validation to validate the new submission



- Select the single database “**ADM\_30B\_Plan\_Mod.mdb**”.
- Click on **Start**.

## 8. Run SpaceVal to validate the new submission (3)

- Click “**Browse**” to select the GIMS database
- Click on “Validate notice”
- Fix all fatal error messages
- Fix as many warning messages as possible.

BRSIS - Validation v9.0.0.6

Notice Id. 90558040

Sat. name: BTN00000  
Type of notice: Plan FSS Status: 50  
Adm./Org.: BTN Orb. pos.: 59.1E Station type: G

Validation

Run as external user

**Graphical data cross validation**

GIMS Database (.mdb)

**ITU internal options**

API check  Run SRSFix  Partial merge option

Task: VALIDATION Database: C:\Temp\BTN\_30B\_Plan\_Mod.mdb

## 9. Submit to the Radiocommunication Bureau

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- Send the validated database to the Bureau via e-submission:

<https://www.itu.int/en/ITU-R/space/e-submission/Pages/default.aspx>