29TH WORLD RADIOCOMMUNICATION SEMINAR
30 November – 11 December 2020

ITUWRS ONLINE2020

Appendix 30B submissions and publications

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When do you need to submit a notice?

When your Administration needs to

- Convert your national allotment into assignment under Article 6 of Appendix 30B;
- Apply for an additional system or modify an existing assignment in the List under Article 6 of Appendix 30B;

To convert your national allotment or to add an additional system you'd better apply Resolution 170, **if**

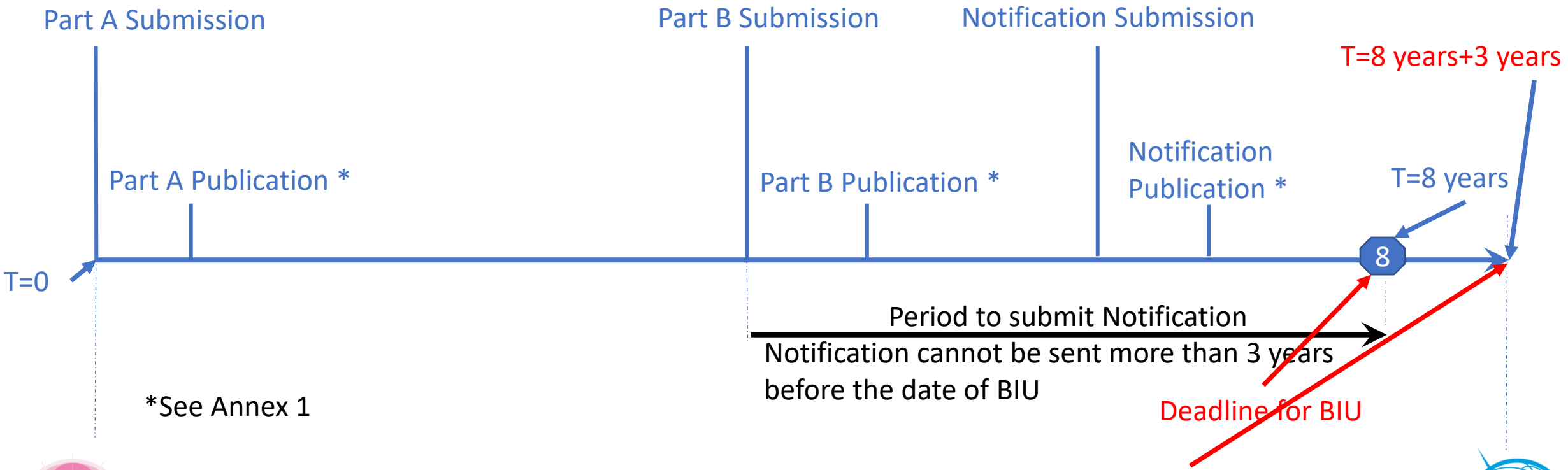
- coverage and service area is limited to one administration or a group of administrations on behalf of which the notice is submitted, and
- the concerned administration(s) don't have any other assignment in the List or already submitted to the Bureau but not yet entered in the List.

- Apply Article 8 for Notification and Bringing into use
- Resolution 49 (treated in another presentation)

In any of these cases you need to submit a notice to the Bureau

When do you need to submit a notice?

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



What kind of data you need 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*	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	Radio astronomy
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	X
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

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

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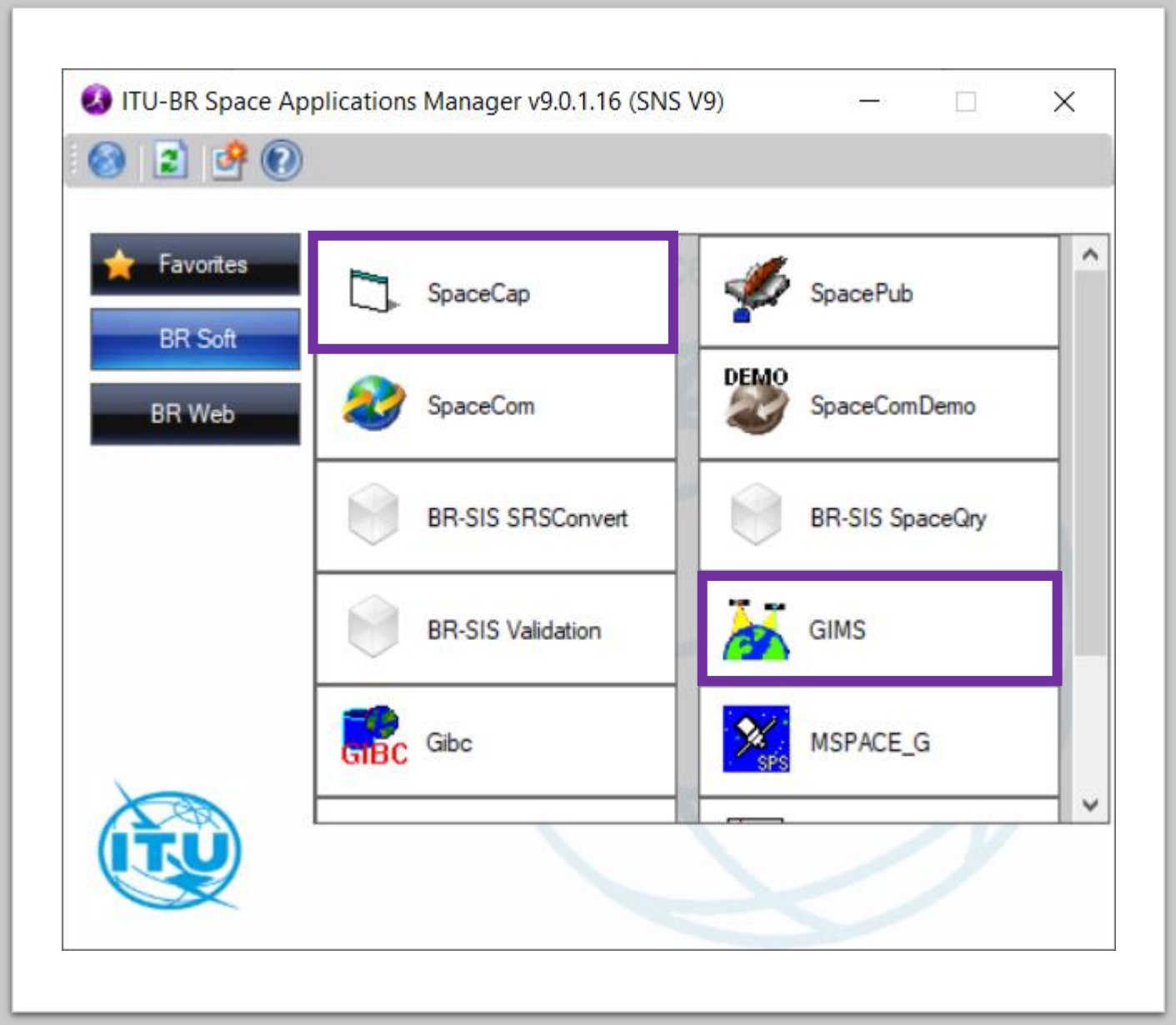
In which format you need to submit these data?

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



Can you submit any data? – Hard limits

Before submitting your notice under Article 6 or 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°)

No 21.16 Limits of power flux-density from space stations

Check with **GIBC/PFD(terrestrial serv.)**

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)

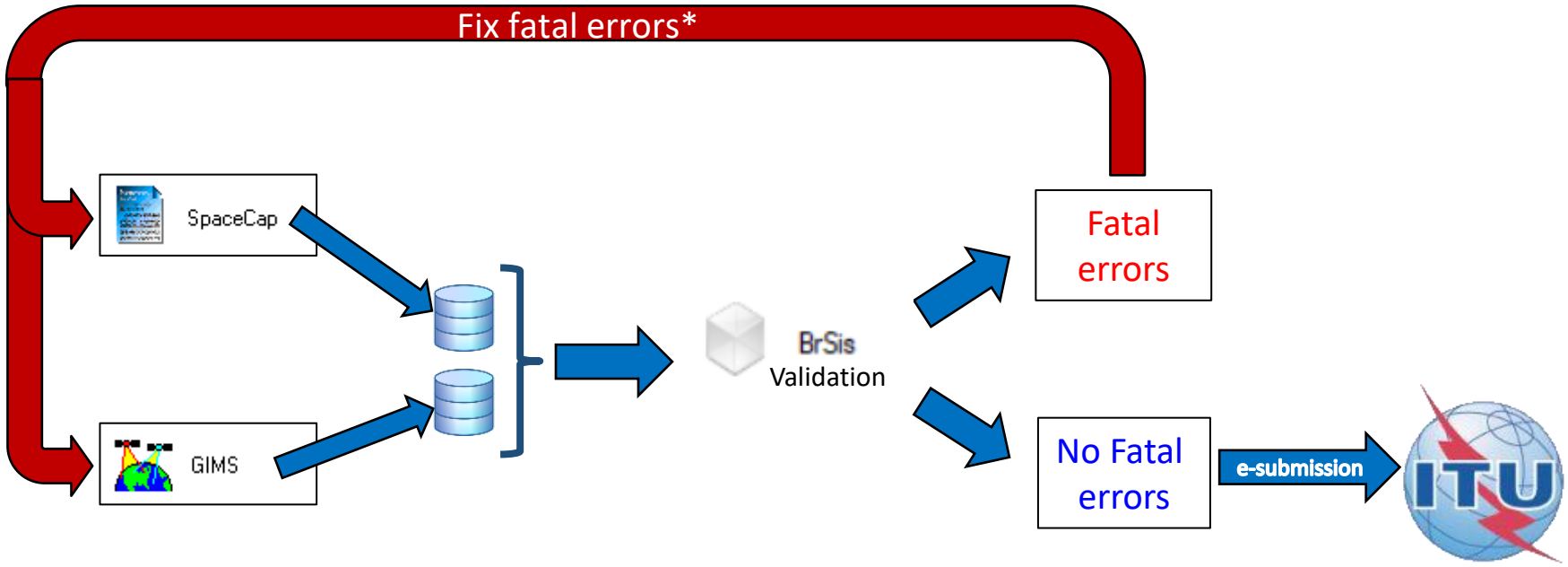
Hard limits to protect satellite networks outside the coordination arc

AP30B Annex 3 Uplink and Downlink pfd limits

Check with **GIBC/Appendix 30B-Annex 3 PFD**

Can you submit any data? – Validation

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



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* If you cannot fix them, you can add a note requesting the Bureau's assistance

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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
- Irrealistic gain contours
- Irrealistic combination of Earth Station diameter 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
- 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

Specific for Part B and Notification in a single submission

- If single notice for Part B and notification, this shall be the notice for notification

Completeness

For both Part A and Part B submissions

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

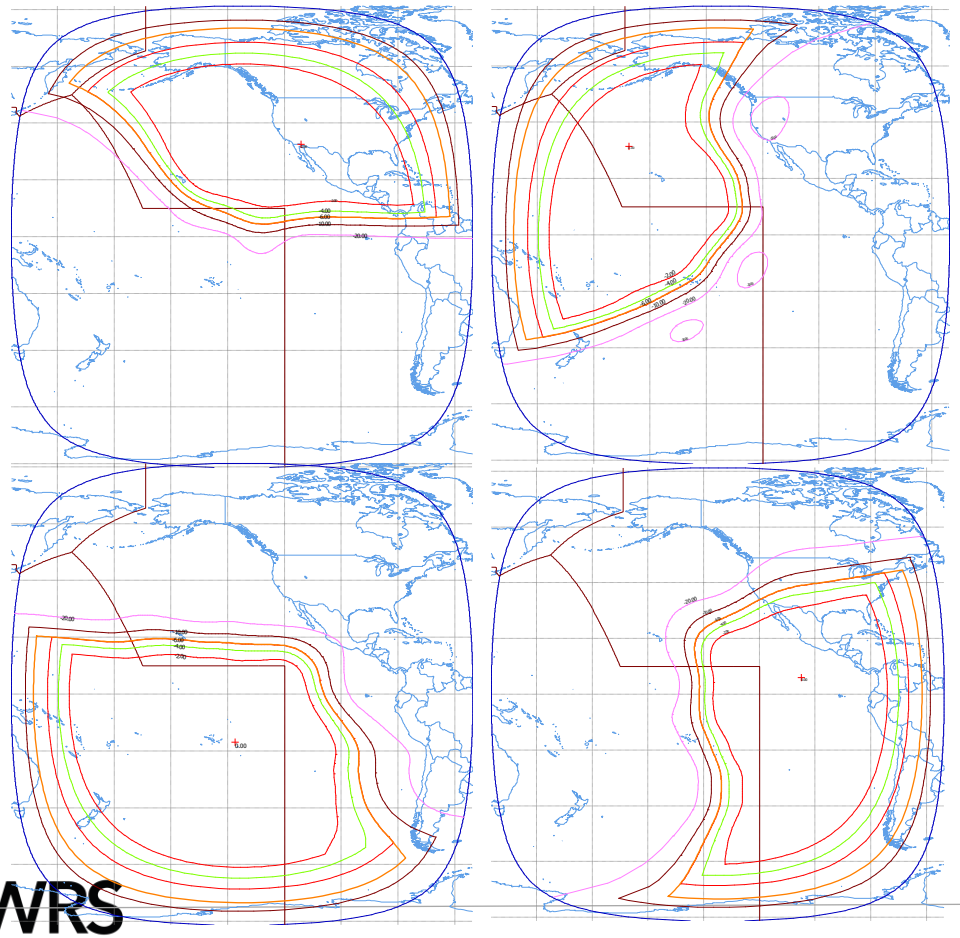
The assignments proposed for deletion are within the envelope of the remaining ones. For further Part B submission no change in flexibility.

Completeness

For both Part A and Part B submissions

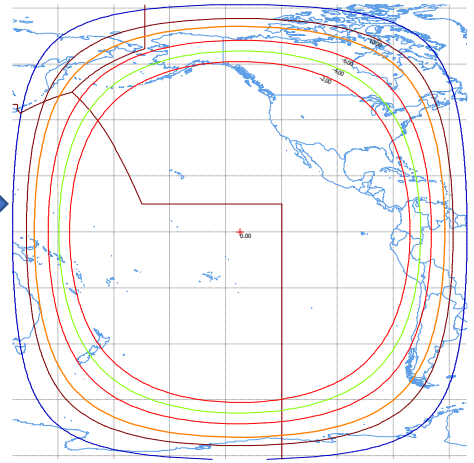
Simplification of the network [4] - EXAMPLE

Submitted configuration



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

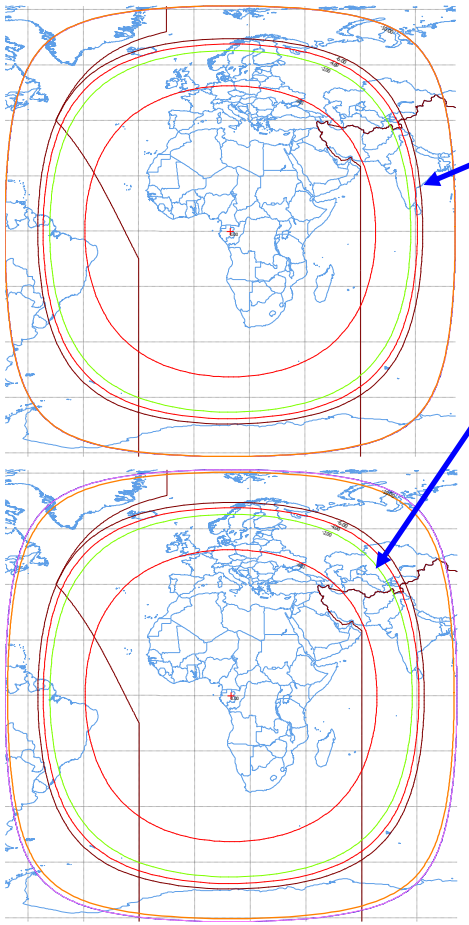
Configuration proposed by the Bureau and accepted by the Administration



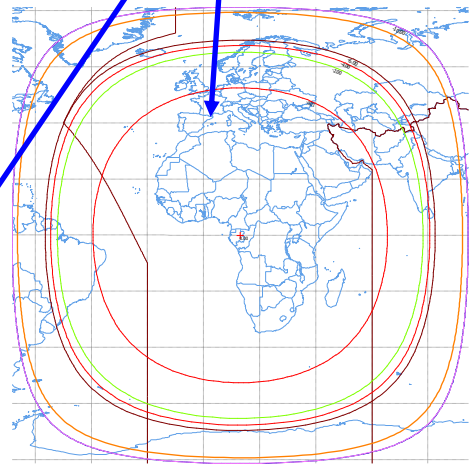
Completeness

For both Part A and Part B submissions

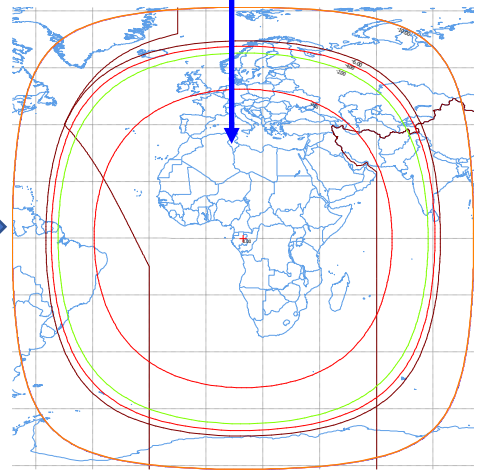
Simplification of the network [5] - EXAMPLE



Submitted configuration
3 global beams and service areas



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

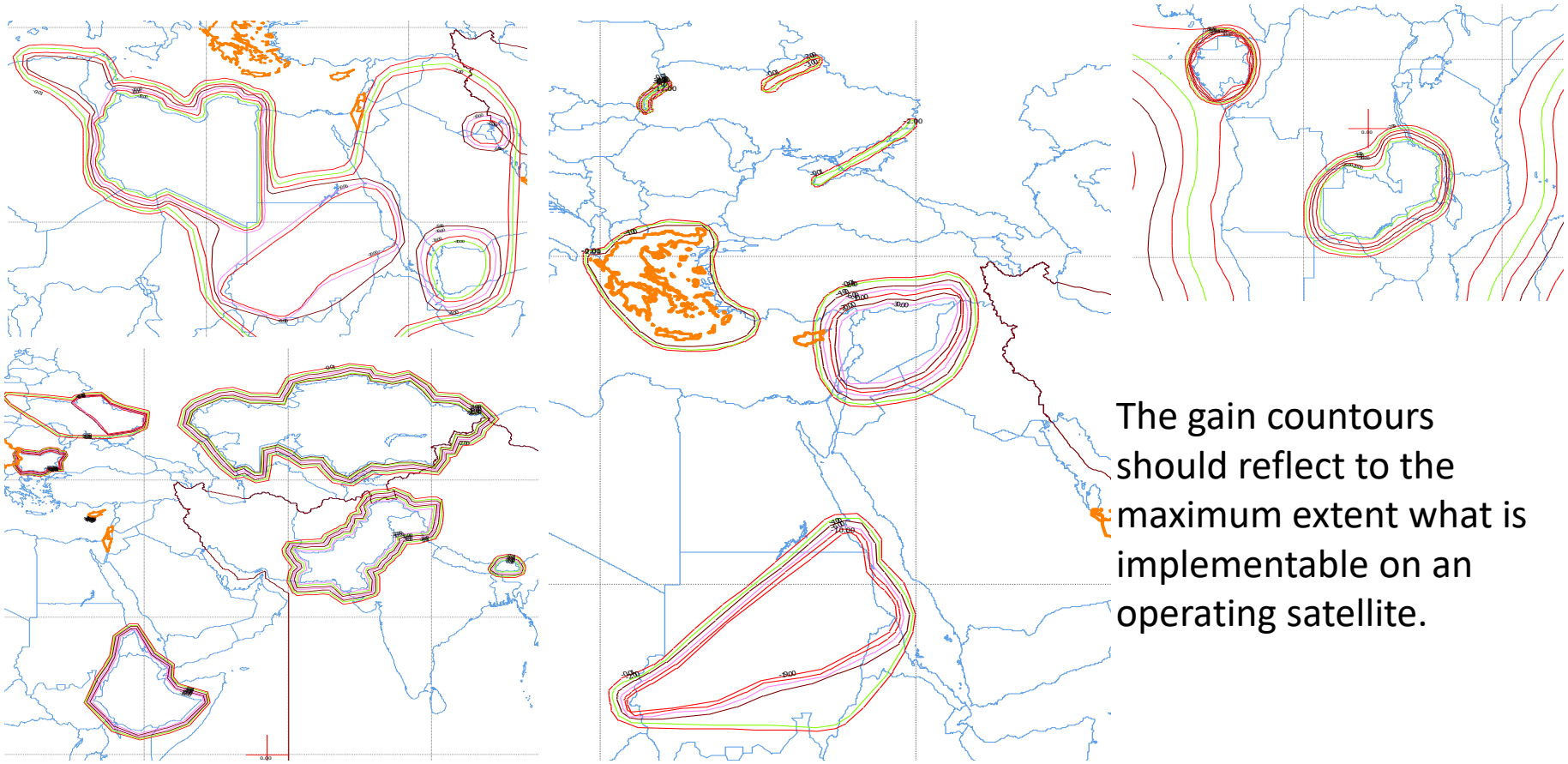


All possible different configurations are allowed in corresponding Part B submission

Completeness

For both Part A and Part B submissions

Irrealistic gain contours [1]

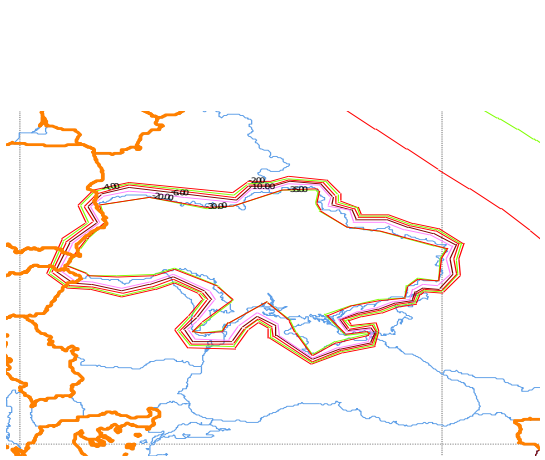


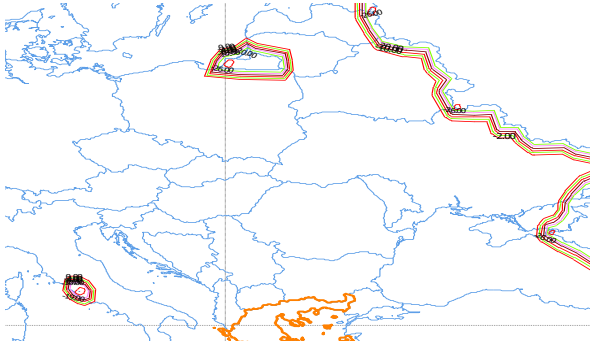
The gain countours should reflect to the maximum extent what is implementable on an operating satellite.

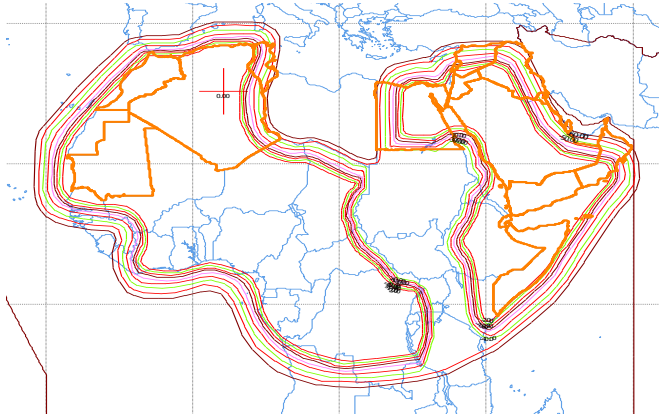
Completeness

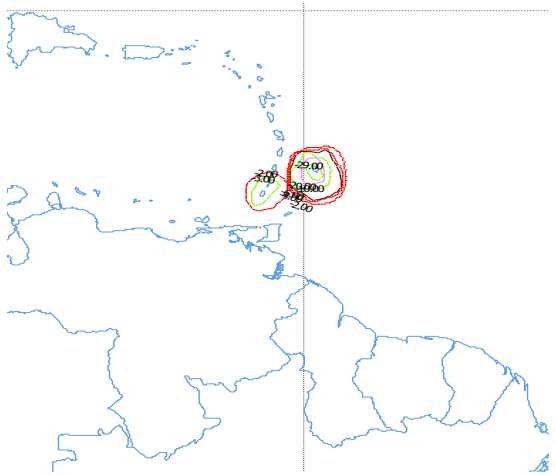
For both Part A and Part B submissions

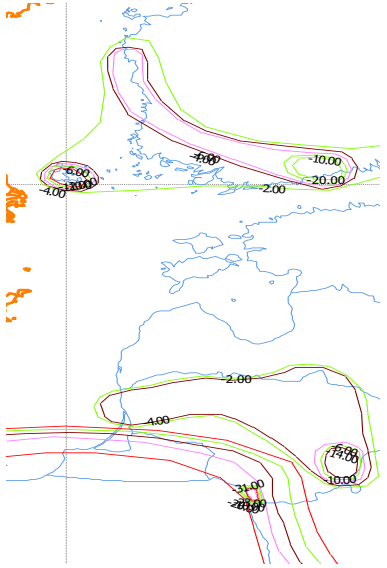
Irrealistic gain contours [2]











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 assignemnt [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

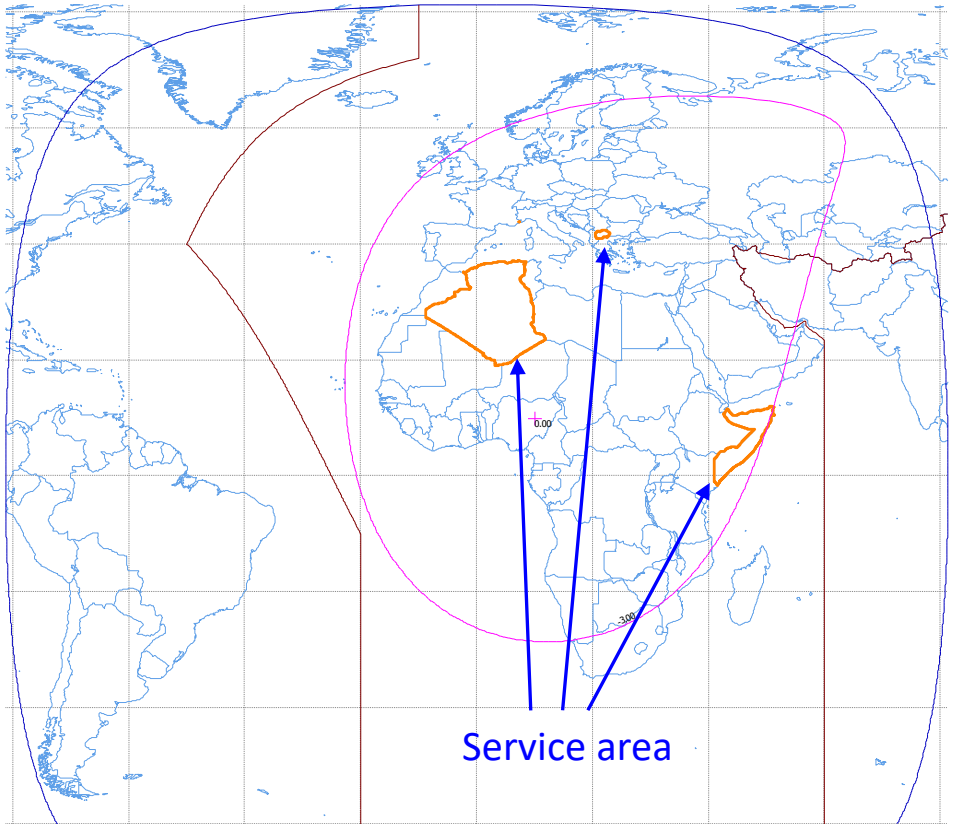
The Bureau receives several submissions with a combination of Earth Station diameter and power density leading to a C/N extremely low. The Bureau invites administrations to submit realistic values.

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.

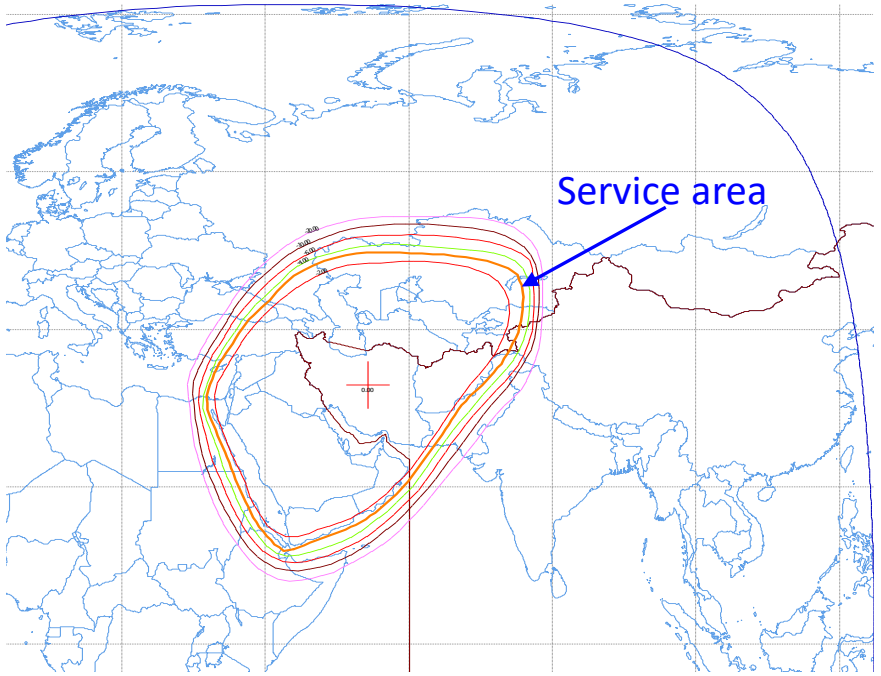


Completeness

For both Part A and Part B submissions

Alignment of coverage and service areas [2]

Example of a service area aligned with the coverage

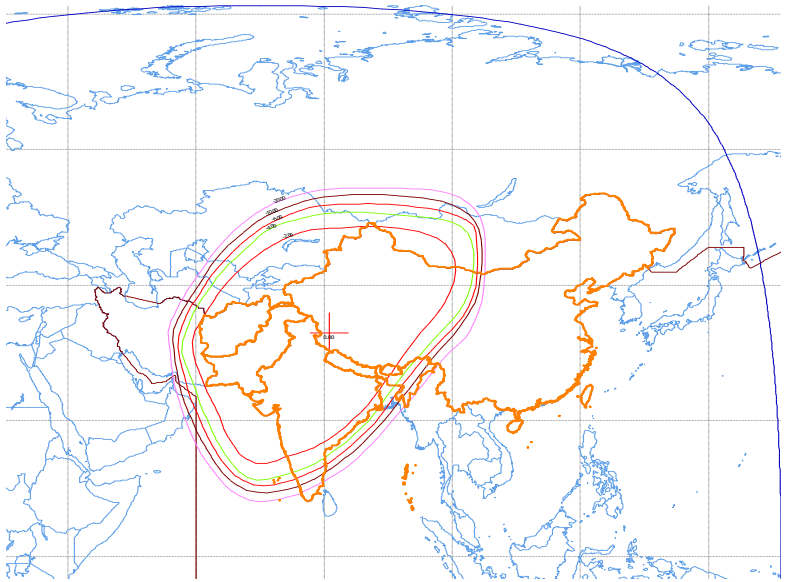


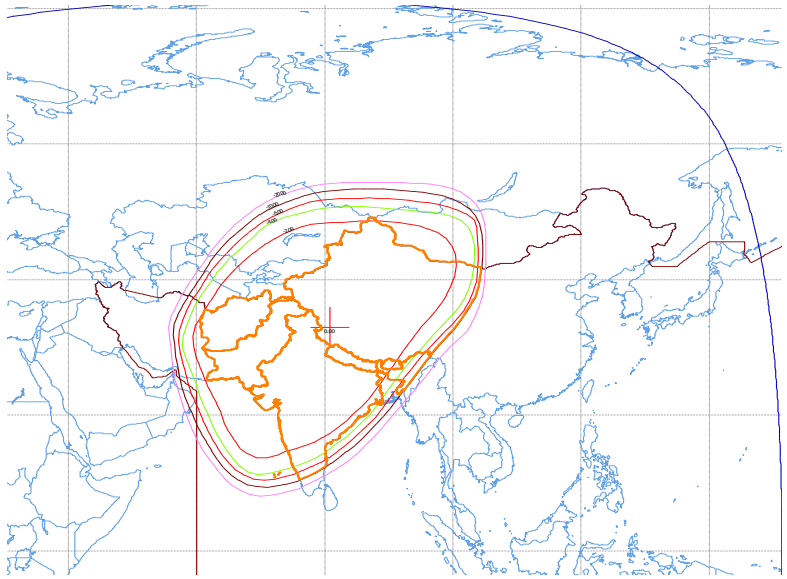
Completeness

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 to low. Your Administration should either modify the coverage or, if the coverages have been already fixed, clip the service area with a raisonnable gain contour.





Completeness

For both Part A and Part B submissions

Test points and service area

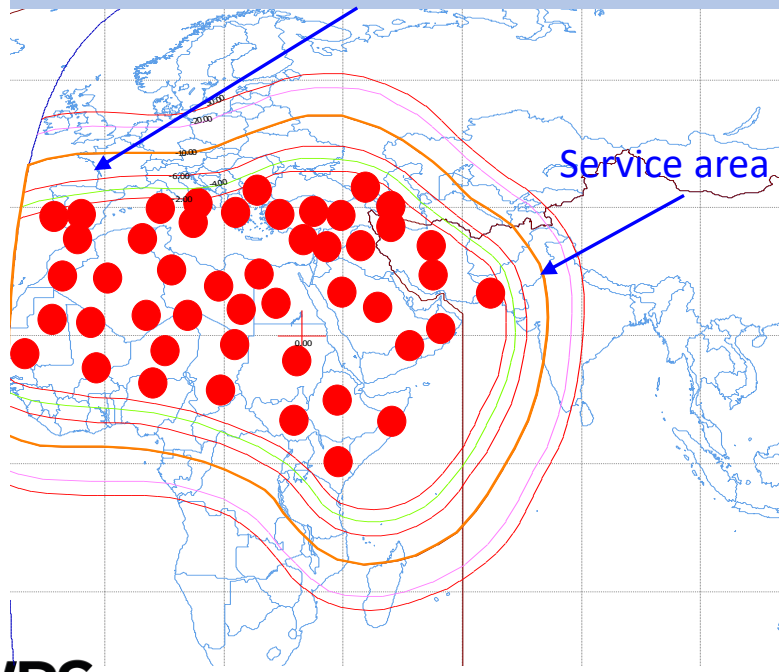
- A service area is defined by a set of test points in a 1-to-1 relation. Same set of test points shall describe the same service area.
- Sovereignty of disputed territories is not yet settled, therefore test points cannot be located in disputed territories. In the Preface, you can find the list of the 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

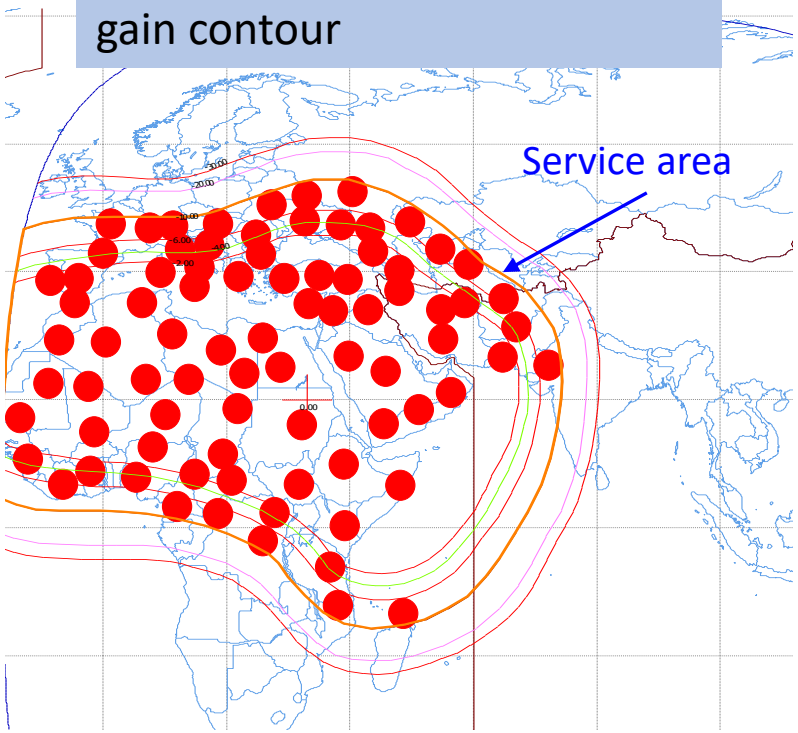
For both Part A and Part B submissions

Test point location

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



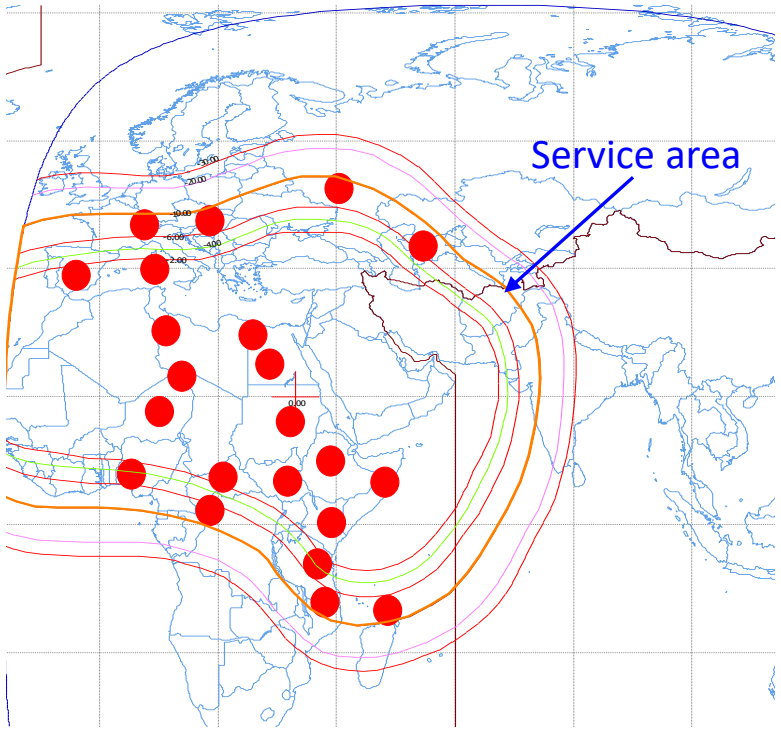
Test points should represent all areas with different relative gain contour



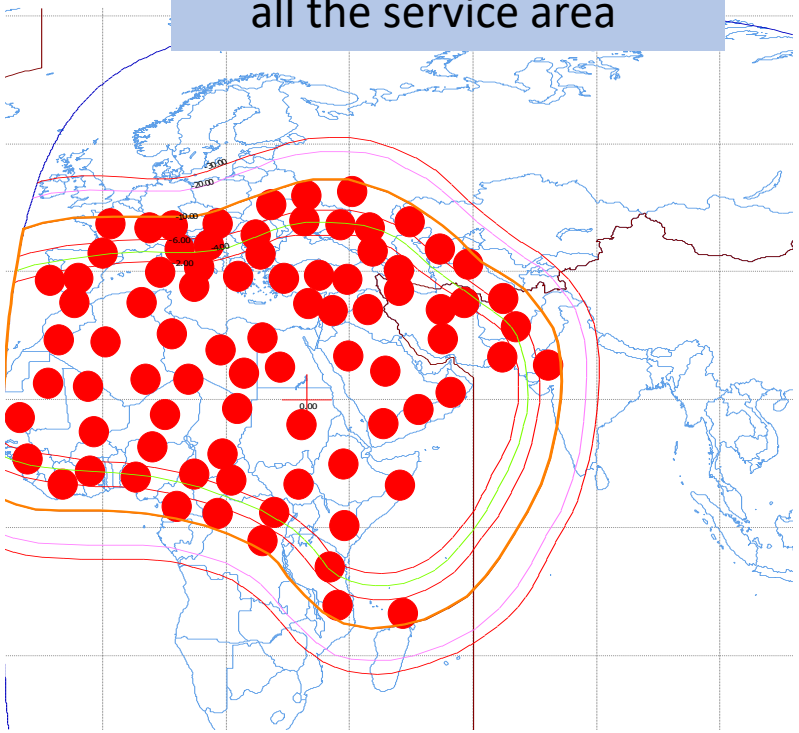
Completeness

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

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 asignments 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,
- If the notifying administrations of the networks are different, the explicit agreement of all the administrations has to be provided at the time of submission,
- 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

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

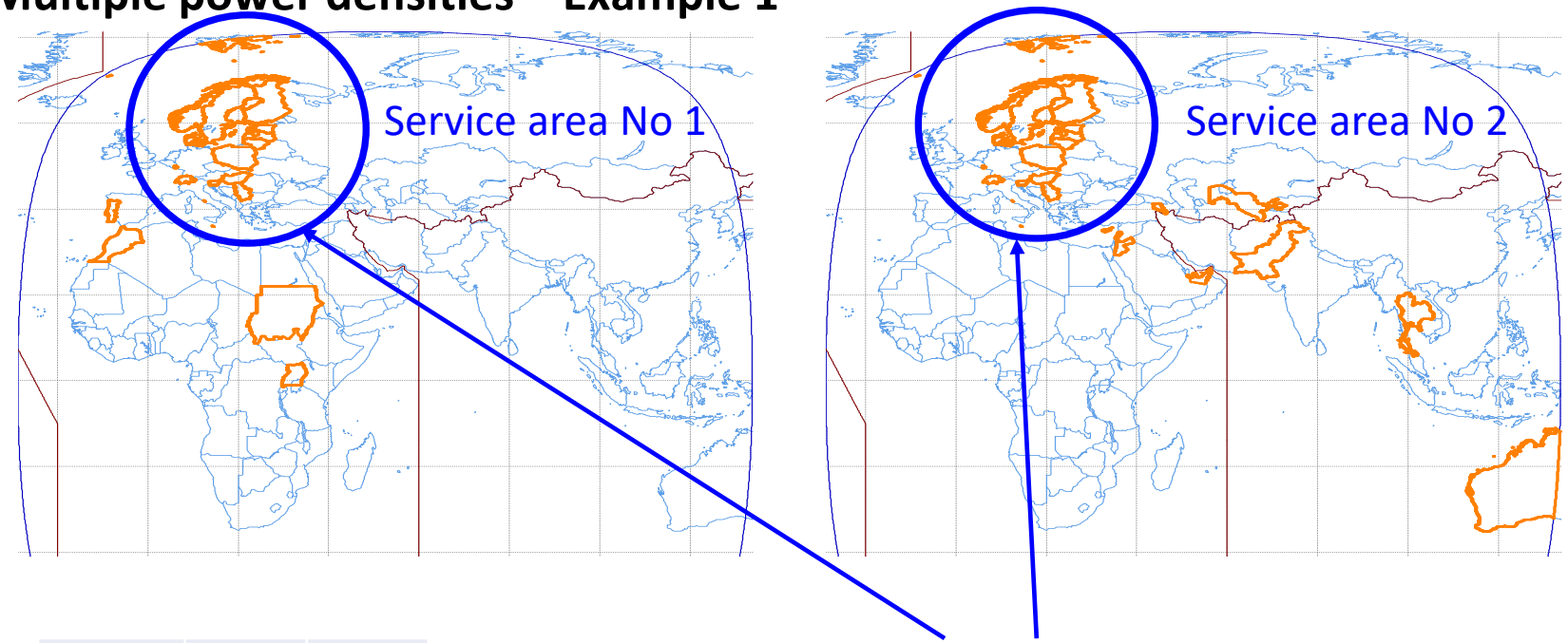
Multiple power densities

- 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



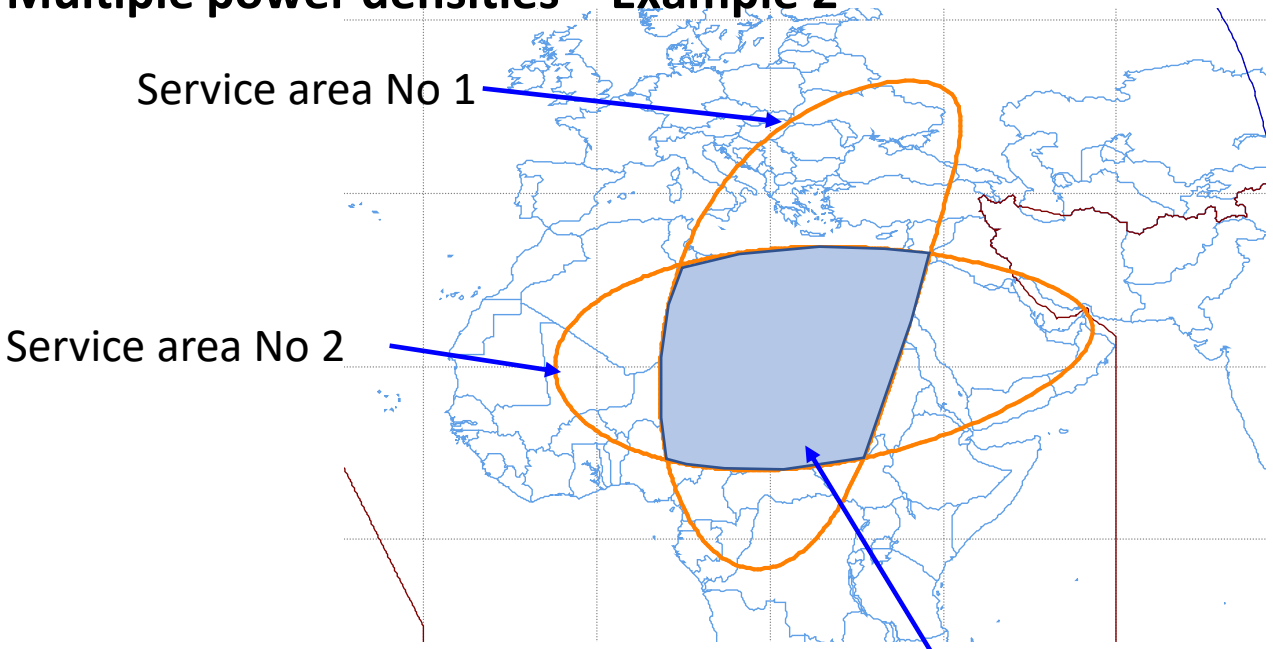
Power density [dBW/Hz]	ES antenna gain [dBi]	Service area number
-60.6	49.8	1
-60.6	55.9	
-60.6	62.0	
-47.6	49.8	2
-47.6	55.9	
-47.6	62.0	

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

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

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

Thank you!

ITU – Radiocommunication Bureau

Questions to brmail@itu.int or patrizia.russo@itu.int

ITUWRS ONLINE2020

Annex 1

Publication – Part A

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE	HISPASAT-93A	SECTION SPÉCIALE Nº SPECIAL SECTION No. SECCIÓN ESPECIAL N.º	AP30B/A6A/586
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE: E	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL: 30 W	BR IFIC / DATE BR IFIC / DATE BR IFIC/ FECHA	2899 / 09.07.2019
NOTIFIÉ AU NOM DE NOTIFIED ON BEHALF OF NOTIFICADA EN NOMBRE DE		NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	119559002
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL			06.03.2019

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 :	09.11.2019

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 / و/أو الشبكات الساتلية المتأثرة/الإدارات

A5 Coordinations	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 - Annexe 4 App.30B, Art.6, § 6.5 - Annex 4 Ap.30B, Art.6, § 6.5 - Anexo 4 附录30B, 第6条, 第6.5款- 附件4 Пр. 30B, Ст. 6, п. 6.5 – Дополнение 4 المذيل 30B، المادة 6، الفقرة 6.5 – الملحق 4							
$2.1 (6/4 GHz)	ATG		Allotment	ATG00000	90558014	77.7 W	5.392
	BLZ		Allotment	BLZ00000	90558034	90.8 W	3.113
	CPV		Allotment	CPV00000	90558057	85.7 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	118559011	88 W	1.239
			Pending	F-SAT-E-30B-88W	113559039	88 W	1.193
	HND		Allotment	HND00000	90558099	76.2 W	4.753
	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
	KNA		Allotment	KNA00000	90558177	88.8 W	8.137
	NCG		Allotment	NCG00000	90558149	84.4 W	35.683
			Pending	NICASAT-1-30B	113559017	84.4 W	29.375
	PHQ		Pending	PACIFICSAT-FSS-88W	115559029	88 W	1.243
	PNR		Allotment	PNR00000	90558165	79.2 W	6.732
	PRG		Allotment	PRG00000	90558168	81.5 W	16.487
	PRU		Allotment	PRU00000	90558169	89.9 W	4.817
	RUS	IK	Pending	IK-87W-F	118559042	87 W	6.778
			Pending	INTERSPUTNIK-87W-F	111559027	87 W	6.778
	SUR		Allotment	SUR00000	90558193	77 W	5.131
	URG		Allotment	URG00000	90558208	86.1 W	24.133
	VCT		Allotment	VCT00000	90558214	93.1 W	1.418
	VEN		Allotment	VEN00001	90558215	82.7 W	24.191
			Allotment	VEN00002	90558216	82.7 W	28.969
$2.1 (13/10-11 GHz)	ATG		Allotment	ATG00000	90558014	77.7 W	9.221
	CPV		Allotment	CPV00000	90558057	85.7 W	22.923
	DOM		Allotment	DOM00000	90558071	85.4 W	24.157
	NOL		Pending	NSS-FSS 87W	116559018	87 W	3.715
	HTI		Allotment	HTI00000	90558102	92 W	1.861
	KNA		Allotment	KNA00000	90558177	88.8 W	7.025
	NCG		Allotment	NCG00000	90558149	84.4 W	37.734
			Pending	NICASAT-1-30B	113559017	84.4 W	31.771
	PRG		Allotment	PRG00000	90558168	81.5 W	1.811
	RUS	IK	Pending	IK-87W-F	118559042	87 W	3.715
			Pending	INTERSPUTNIK-87W-F	111559027	87 W	3.715
	SUR		Allotment	SUR00000	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 IDENTIFICATIO N	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	ASAISAT-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
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE	F-SAT-E-30B-13E	SECTION SPÉCIALE Nº SPECIAL SECTION No. SECCIÓN ESPECIAL N.º	AP30B/A6B/132
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	F	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	13 E
		BR IFIC / DATE BR IFIC / DATE BR IFIC/ FECHA	2900 / 23.07.2019
NOTIFIÉ AU NOM DE NOTIFIED ON BEHALF OF NOTIFICADA EN NOMBRE DE		NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	111559011
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL			15.03.2019

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:
[X] 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.	[X] Notice examined under § 6.19, § 6.21 and § 6.22, corresponding assignments entered in the List and published under § 6.23.	[X] Notificación examinada con arreglo al § 6.19, § 6.21 y § 6.22 y asignaciones correspondientes inscritas en la Lista y publicadas con arreglo al § 6.23.
[ ] Fiche de notification examinée au titre du § 6.19 et retournée à l'administration notificatrice au titre du § 6.20.	[ ] Notice examined under § 6.19 and returned to the notifying administration under § 6.20.	[ ] Notificación examinada con arreglo al § 6.19 y devueltas a la administración notificante con arreglo al § 6.20.
[ ] Fiche de notification examinée au titre des § 6.21 et 6.22 et retournée à l'administration notificatrice au titre du § 6.24.	[ ] Notice examined under § 6.21 and § 6.22 and returned to the notifying administration under § 6.24.	[ ] Notificación examinada con arreglo al § 6.21 y § 6.22 y devueltas a la administración notificante con arreglo al § 6.24.
[ ] 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.	[ ] Notice returned under § 6.24, resubmitted, and corresponding assignments provisionally entered in the List under § 6.25.	[ ] Notificación devuelta con arreglo al § 6.24, presentada de nuevo y asignaciones correspondientes inscritas provisionalmente en la Lista con arreglo al § 6.25.
[ ] Assignation figurant dans la Liste et dont la zone de service a été modifiée au titre du § 6.16	[ ] Assignment in the List and whose service area has been modified under § 6.16	[ ] Asignación que figura en la Lista y cuya área de servicio ha sido modificada con arreglo al § 6.16
[ ] 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).	[ ] Assignment cancelled from the List and allotment reinstated in the Appendix **30B** Plan under § 6.33 a) § 6.33 b) and § 6.33 c).	[ ] 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).
[ ] Allotissement inscrit dans le Plan de l'Appendice **30B** au titre du § 6.35 conformément à une décision de la CMR.	[ ] Allotment entered in the Appendix **30B** Plan under § 6.35 according to a WRC decision.	[ ] 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
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE	LUX-30B-G4-19.2E			PARTIE PART PARTE	I-S
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA	---			BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA	2834 / 06.12.2016
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	LUX	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	19.2 E	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	115570009
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL					11.11.2015

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 Préface.	For more details on the regulatory provisions and the explanation of the codes or symbols used in this publication, please consult the Preface.	Para más detalles sobre las disposiciones reglamentarias y la explicación de los códigos o símbolos utilizados en esta publicación, sírvase consultar el Prefacio.

Publication – Part II-S

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE	LUX-30B-G4-19.2E			PARTIE PART PARTE	II-S
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA	---			BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA	2834 / 06.12.2016
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	LUX	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	19.2 E	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NÚMERO DE IDENTIFICACIÓN	115570009
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL					11.11.2015

Assignations de fréquence inscrites dans le Fichier de référence au titre de		Frequency assignments recorded in the Master Register under		Asignaciones de frecuencia inscritas en el Registro con arreglo al	
	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 Préface.	For more details on the regulatory provisions and the explanation of the codes or symbols used in this publication, please consult the Preface.	Para más detalles sobre las disposiciones reglamentarias y la explicación de los códigos o símbolos utilizados en esta publicación, sírvase consultar el Prefacio.

Publication – Part III-S

UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

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

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

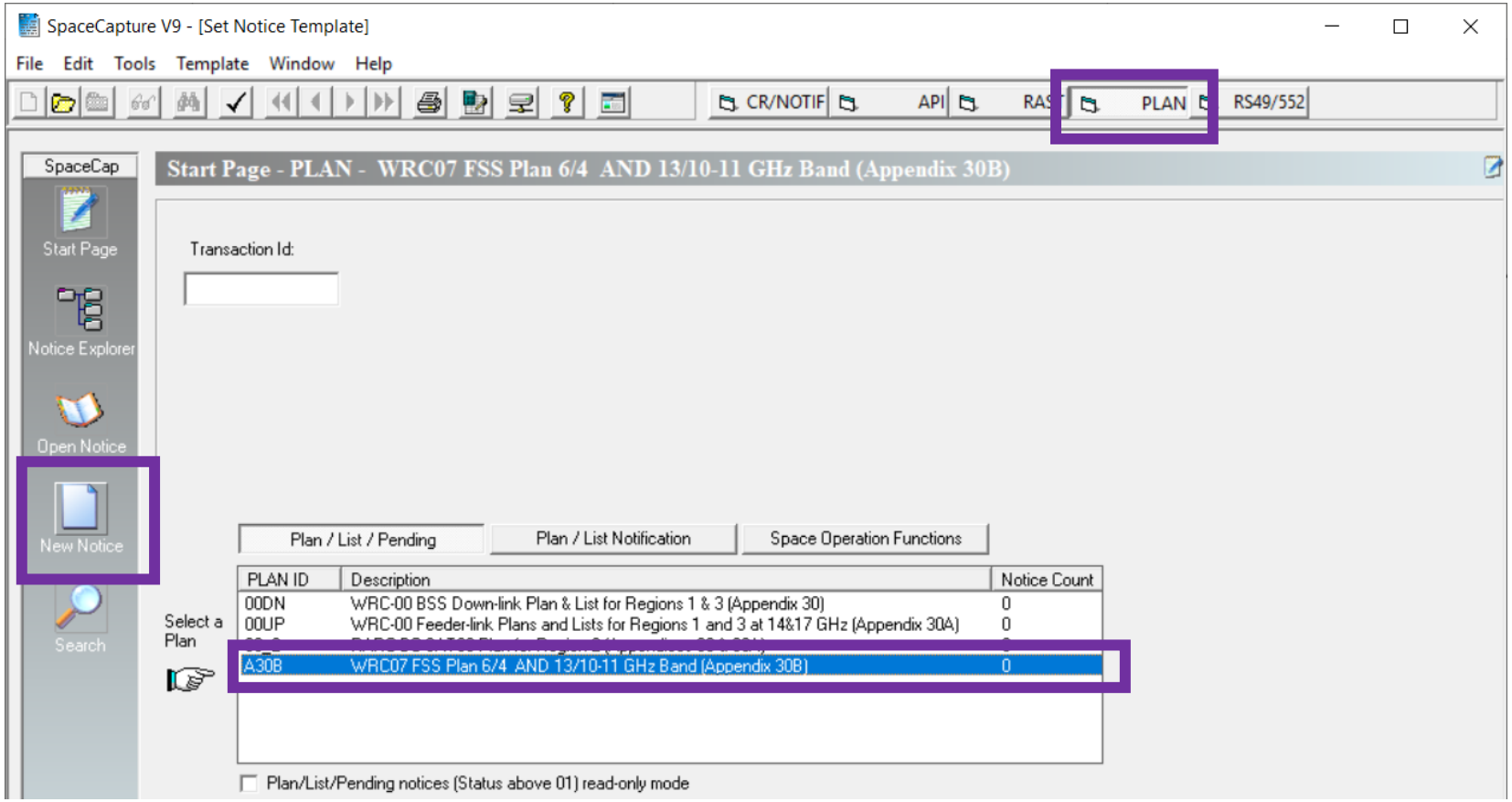
	Article 11 du Règlement des radiocommunications / Article 11 of the Radio Regulations / Artículo 11 del Reglamento de Radiocomunicaciones
	Article 5 des Appendices 30 et/ou 30A / Article 5 of Appendices 30 and/or 30A / Artículo 5 de los Apéndices 30 y/o 30A
X	**Article 8 de l'Appendice 30B / Article 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 Préface	For more details on the regulatory provisions and the explanation of the codes or symbols used in this publication, please consult the Preface.	Para más detalles sobre las disposiciones reglamentarias y la explicación de los códigos o símbolos utilizados en esta publicación, sírvase consultar el Prefacio.

Annex 2

How to prepare an SNS database?

Creating a new notice through SpaceCap



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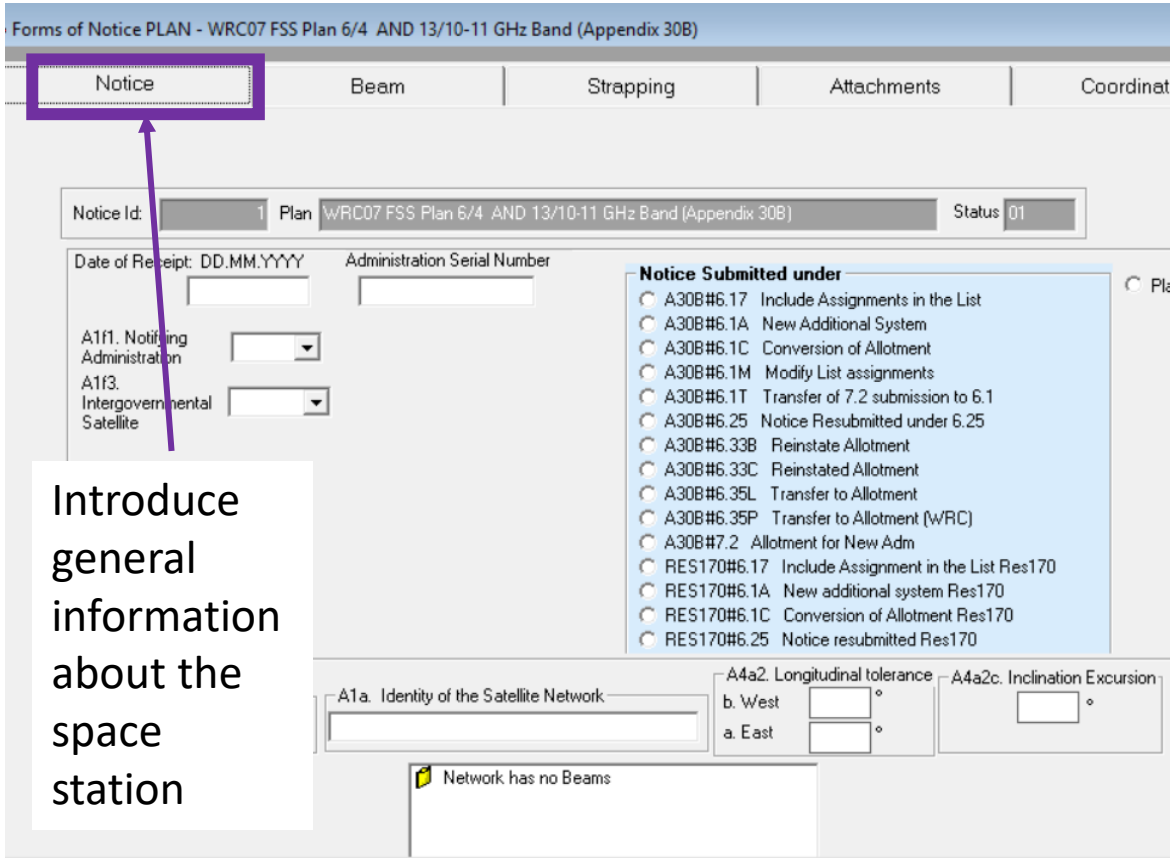
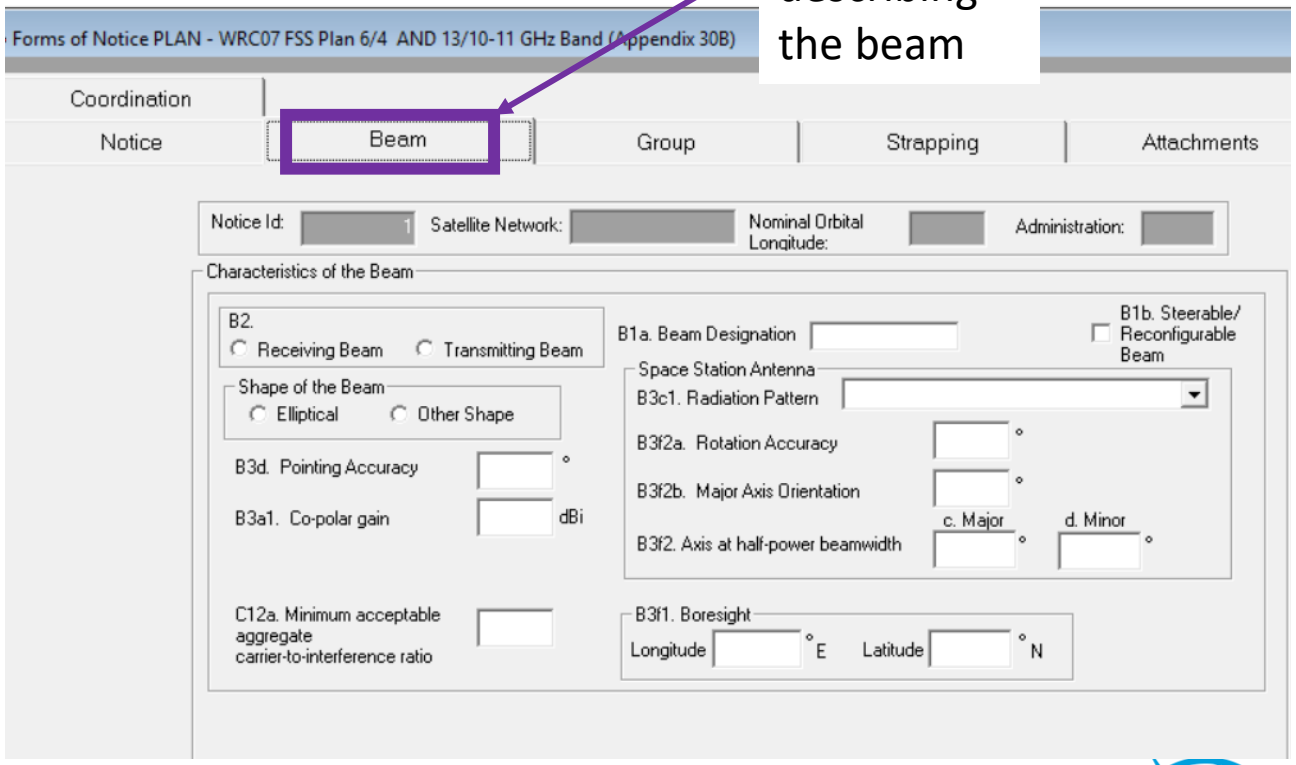
How to prepare an SNS database?



Introduce general information about the space station

Introduce information describing the beam



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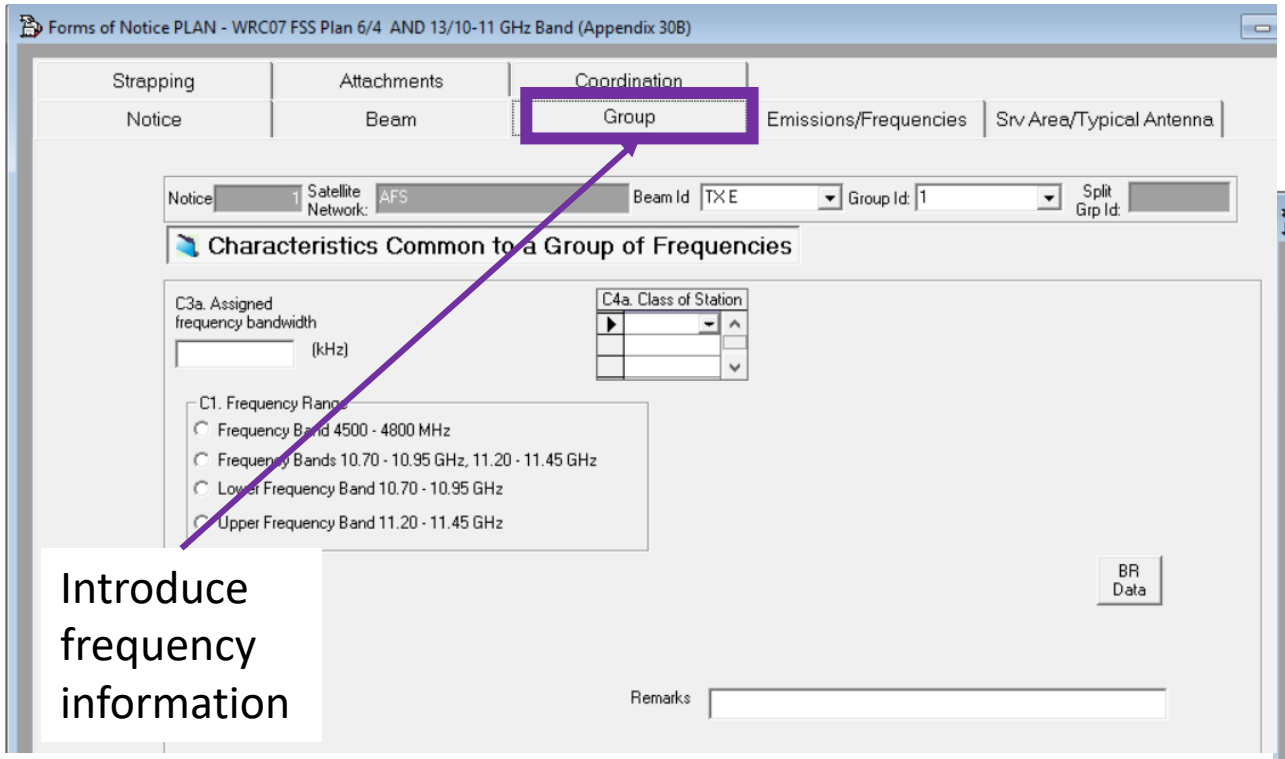
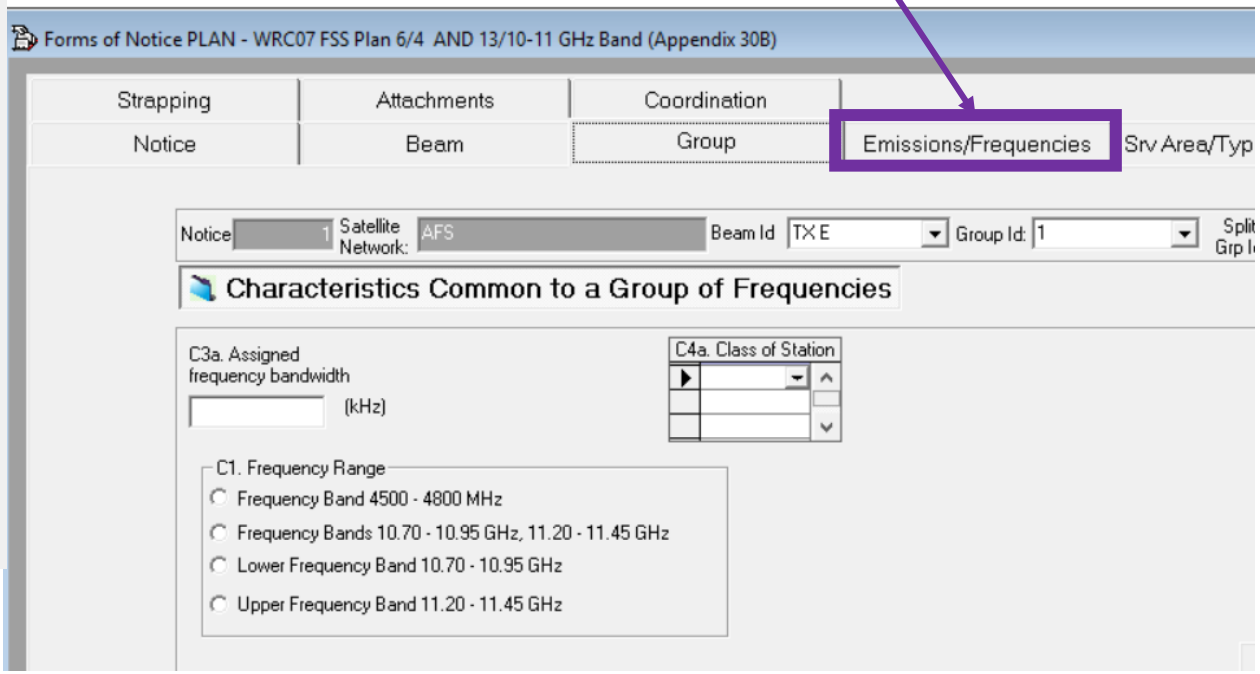
How to prepare an SNS database?



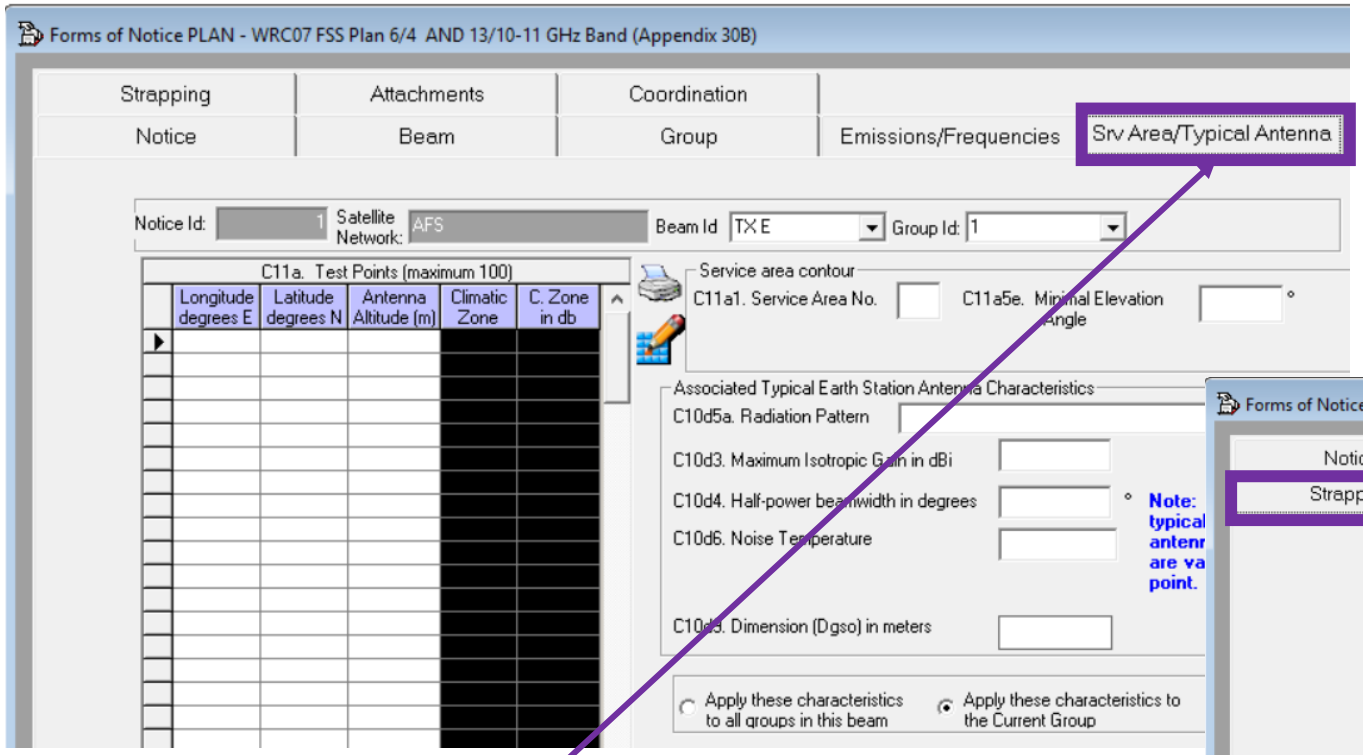
Introduce frequency information

Introduce information concerning the emitted power



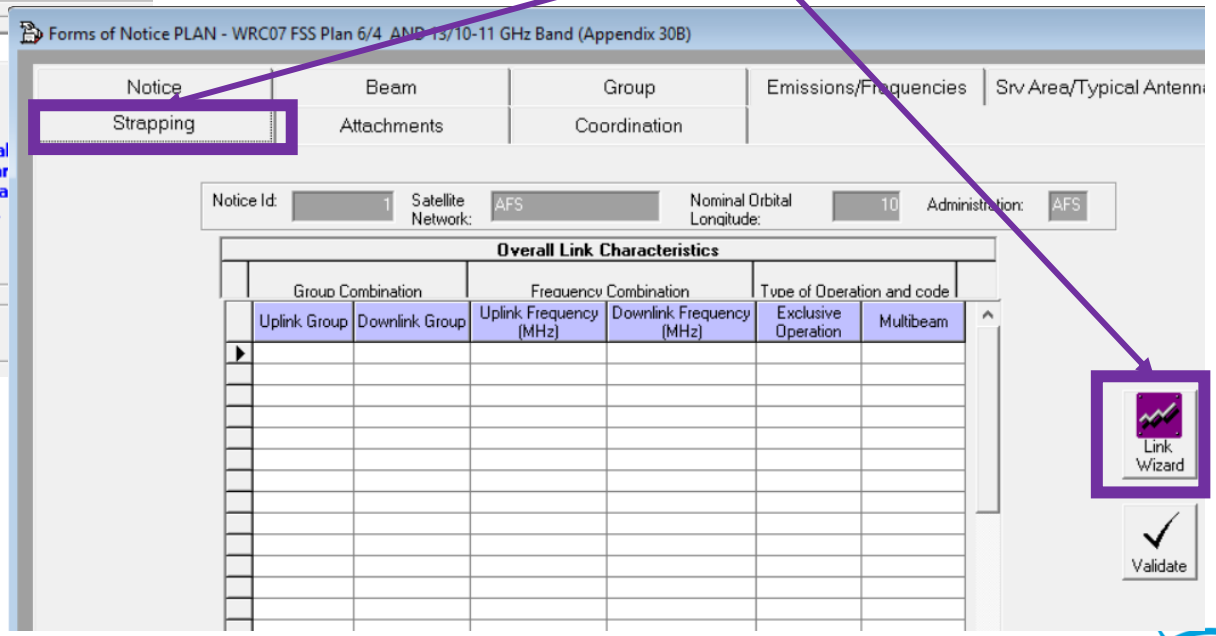
ITUWRS ONLINE2020

How to prepare an SNS database?



Introduce information concerning the Earth station and service area

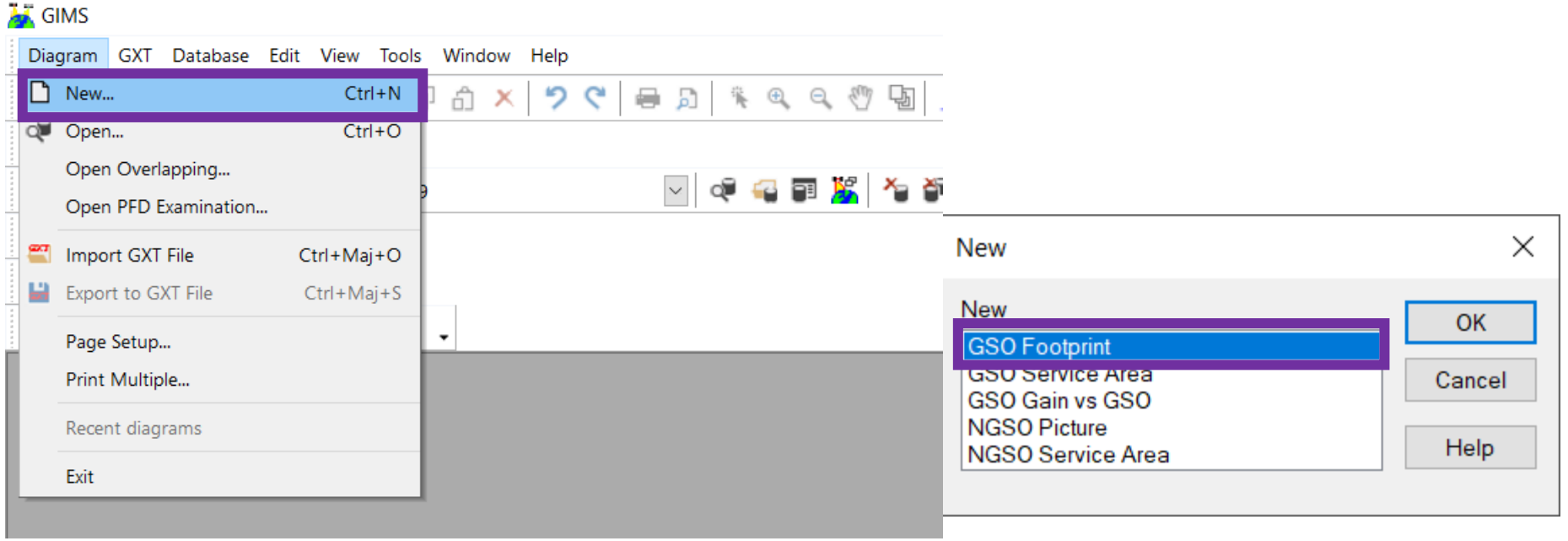
Introduce information concerning the connection between uplink and downlink (strapping). Use the Link Wizard for Article 6



ITUWRS ONLINE2020

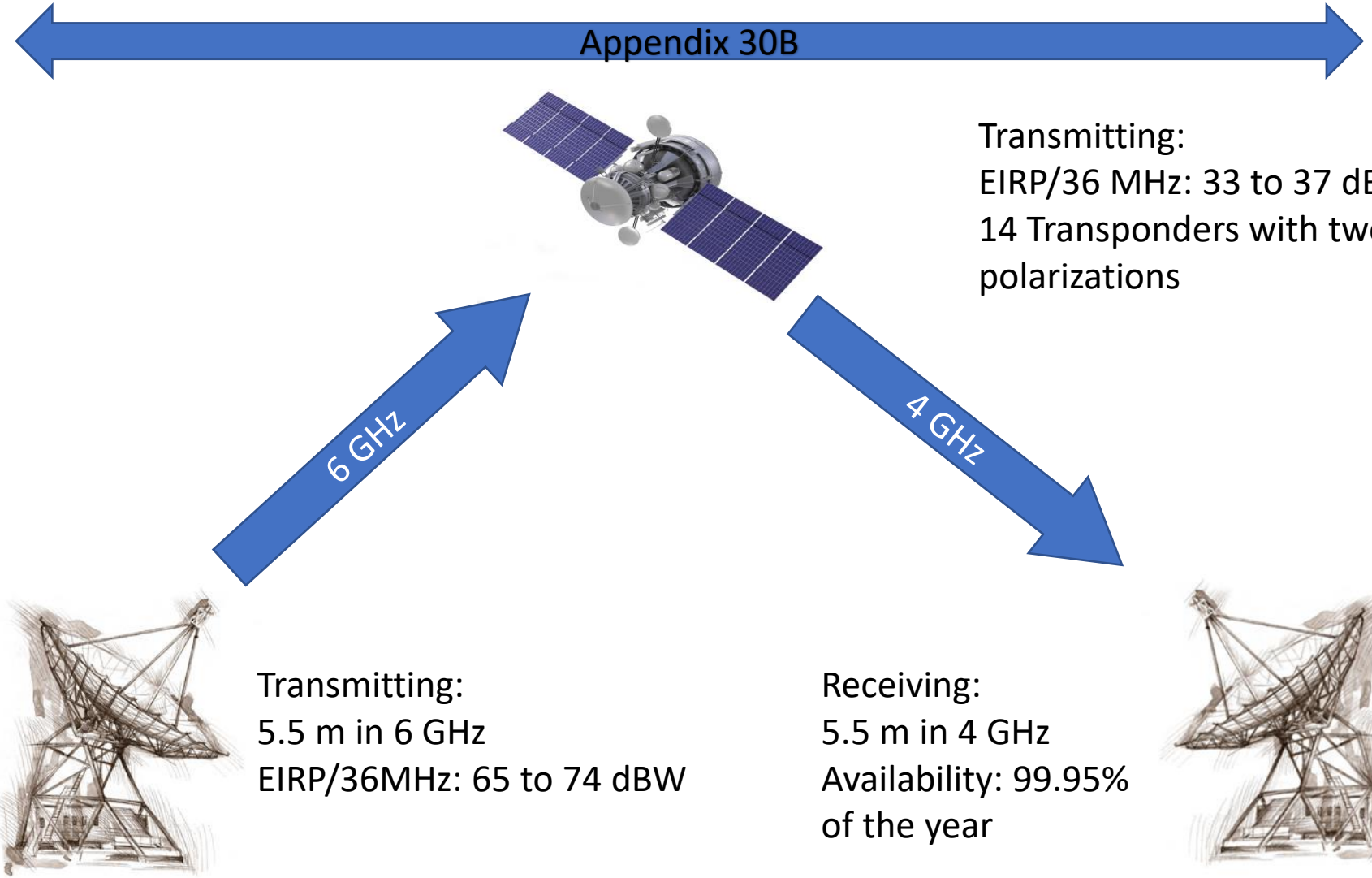
How to prepare a Gims database?

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

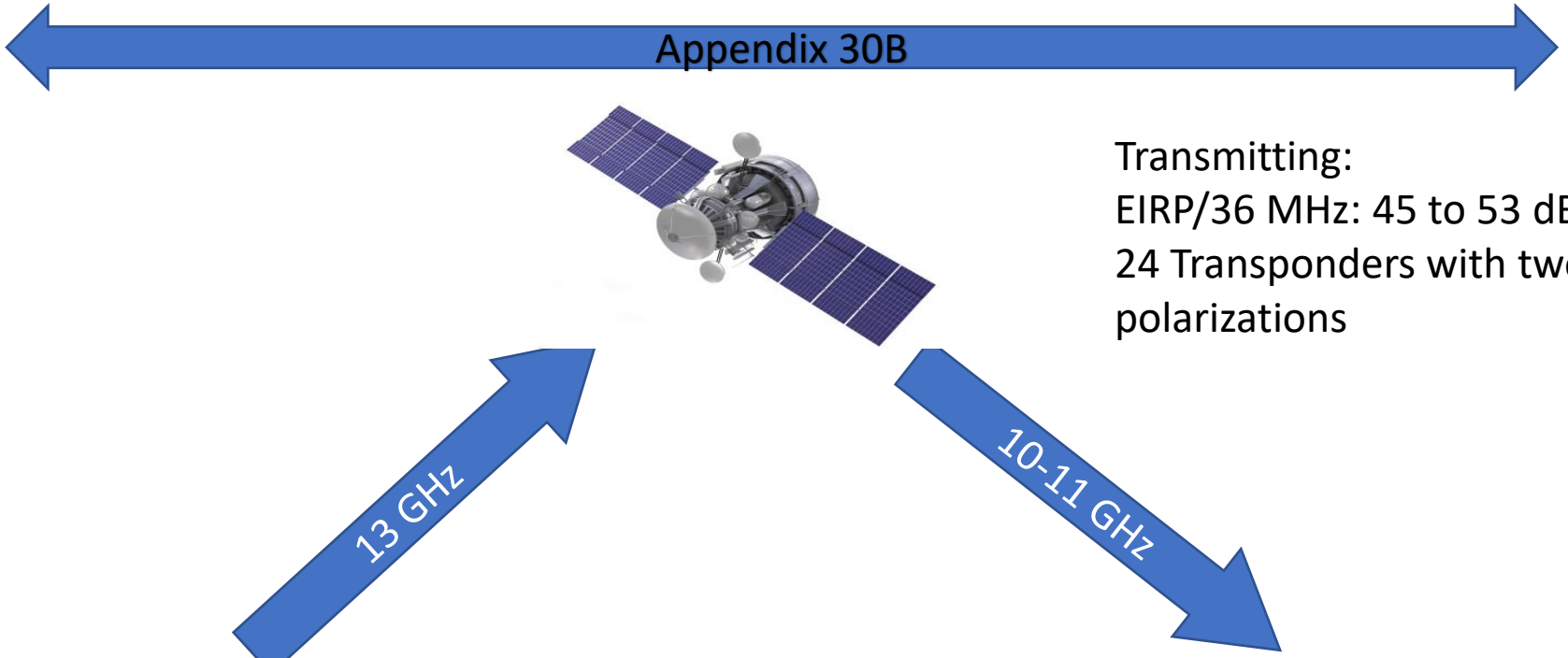


Example: creation of a notice starting from your Plan allotment

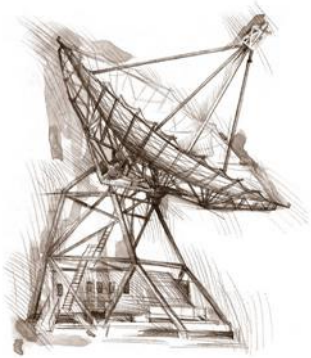
A complete link



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

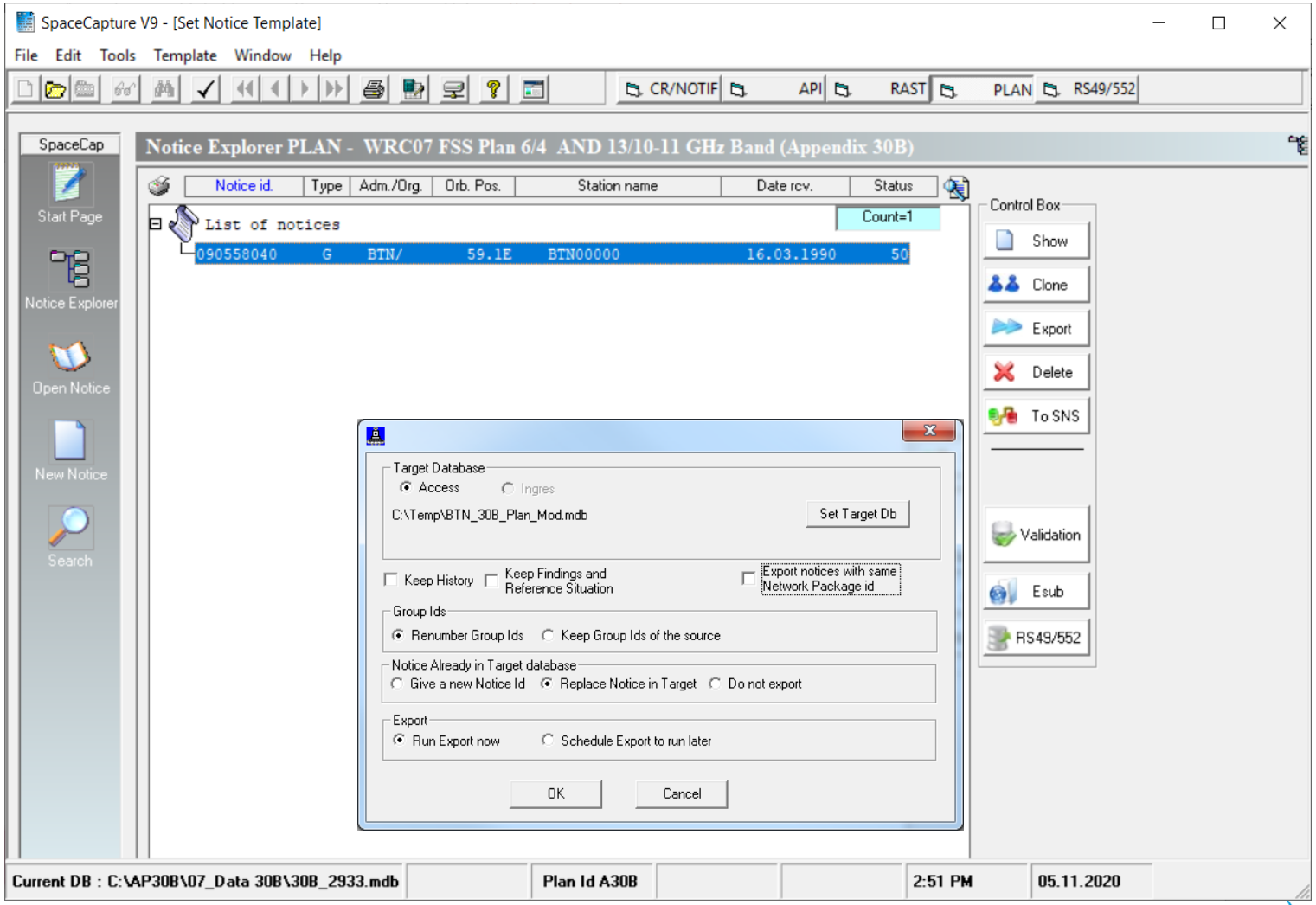
Receiving:
2.7 m in 10-11 GHz
Availability: 99.9% of the year

Steps to do for each beam

1. Use **SpaceCap** to export your Plan in **30B_2933** 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_2933 database into a single database; name it ADM_30B_Plan_Mod.mdb

- Open **SpaceCap** from **SAM**
- From "**File**" menu, Open **30B_IFIC2933 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**)



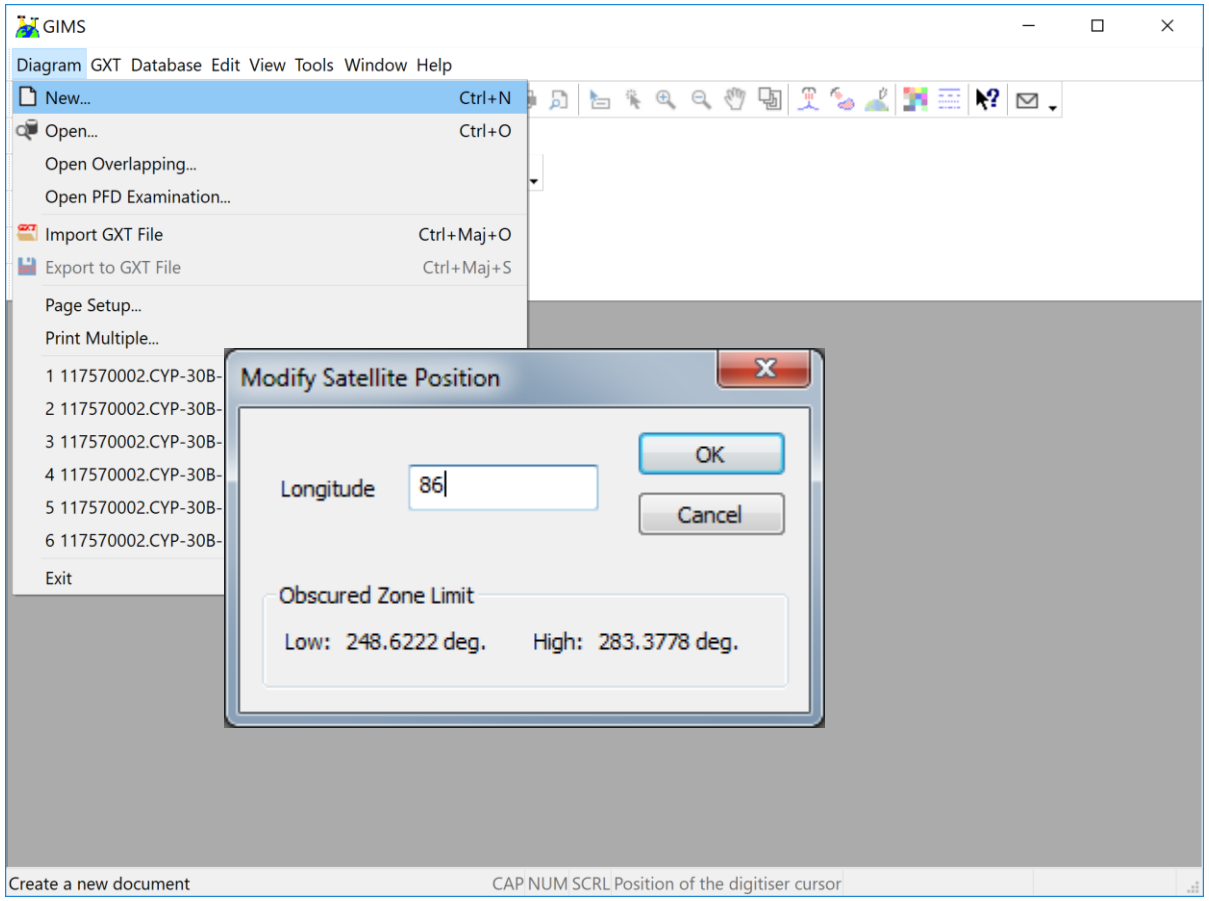
2. Select an orbital position

- For this exercise, let's select the orbital position **86^0 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)

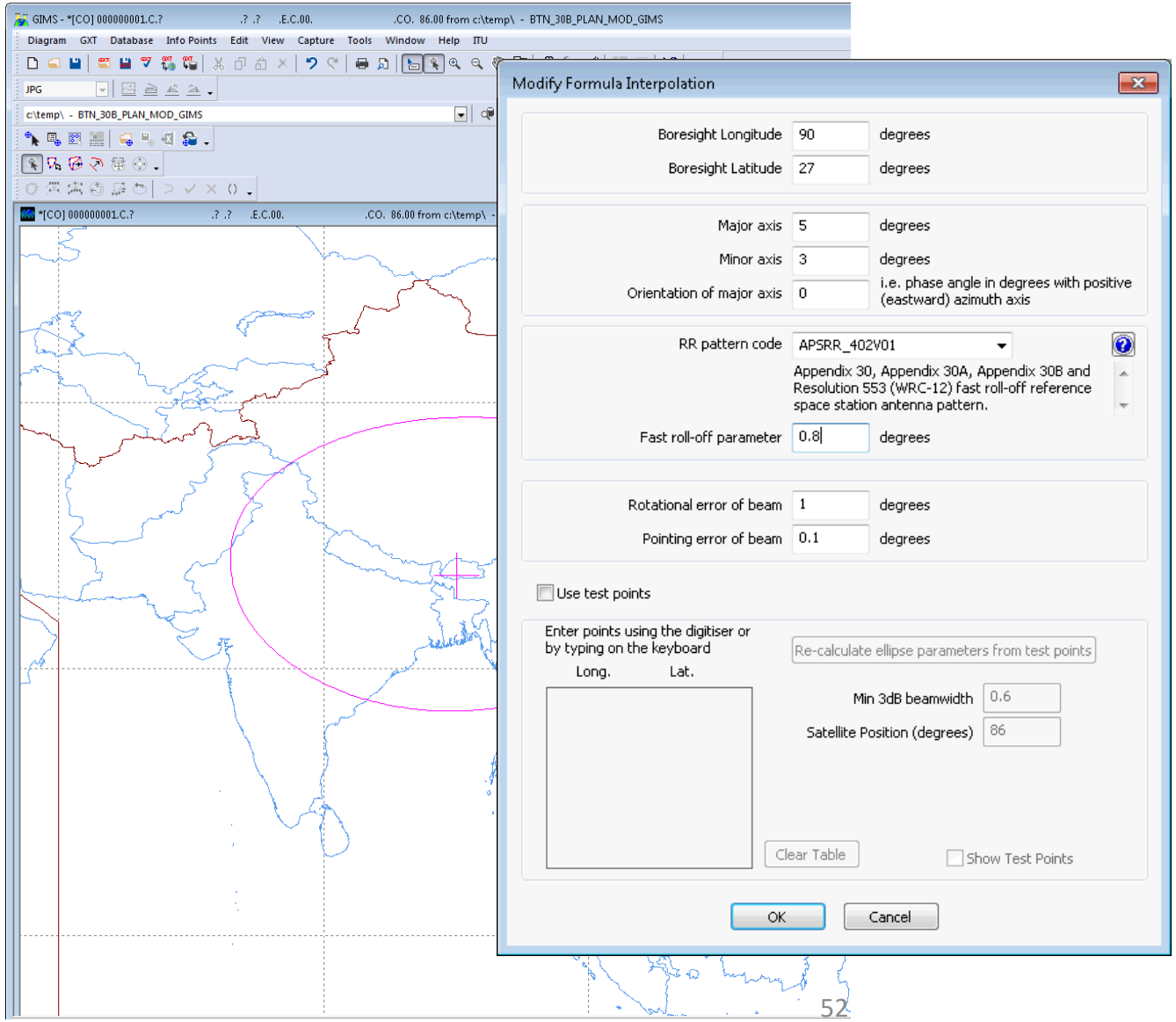
- Open GIMS from SAM
- You need to create a local GIMS database.
- From “Diagram” menu, Select “New” and then “Footprint”
- Enter “86” and click “OK”



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

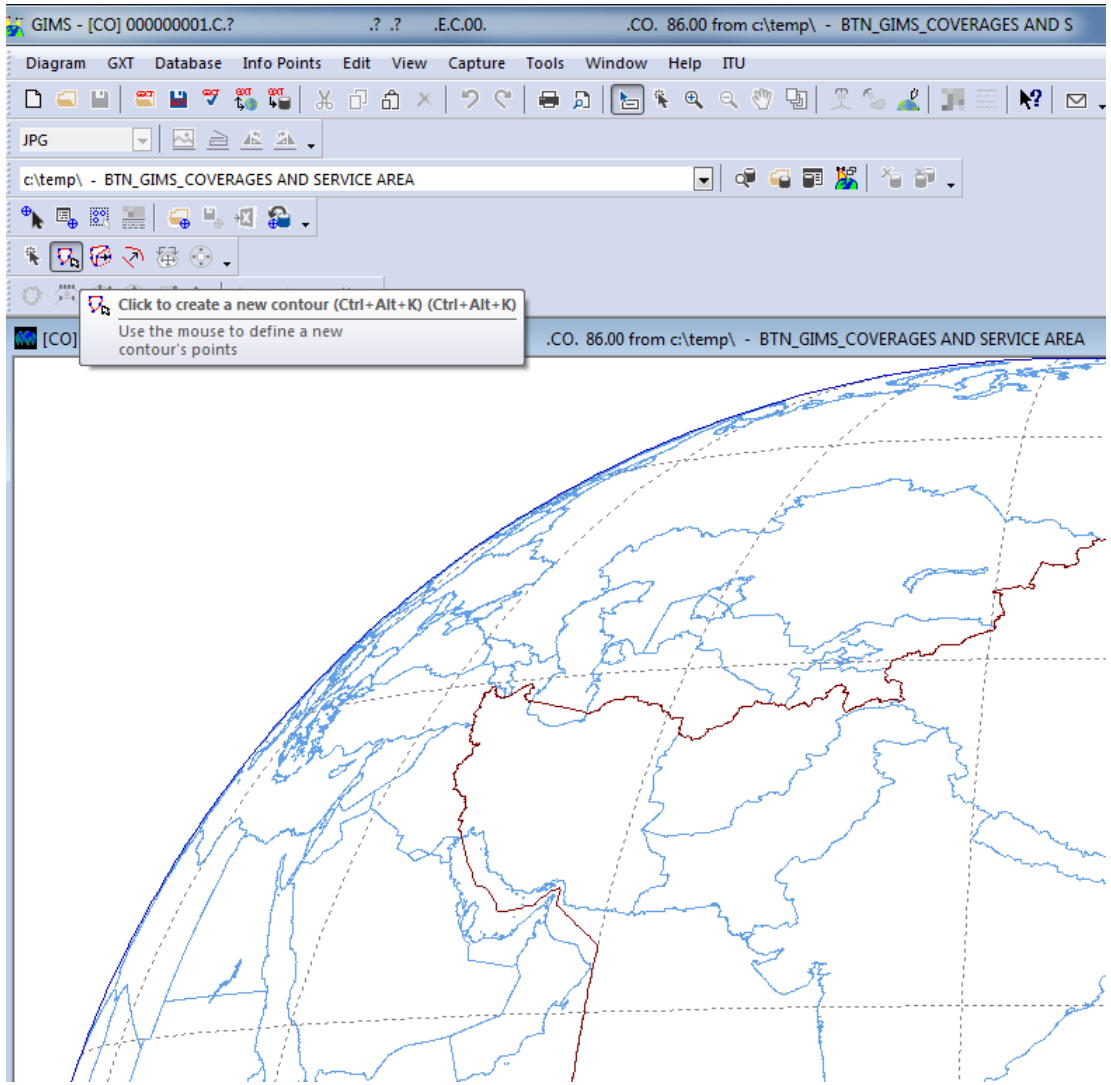
To capture an elliptical beam, you click on
- Capture
- -3dB ellipse

And you insert the data that characterise the ellipsys.
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



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

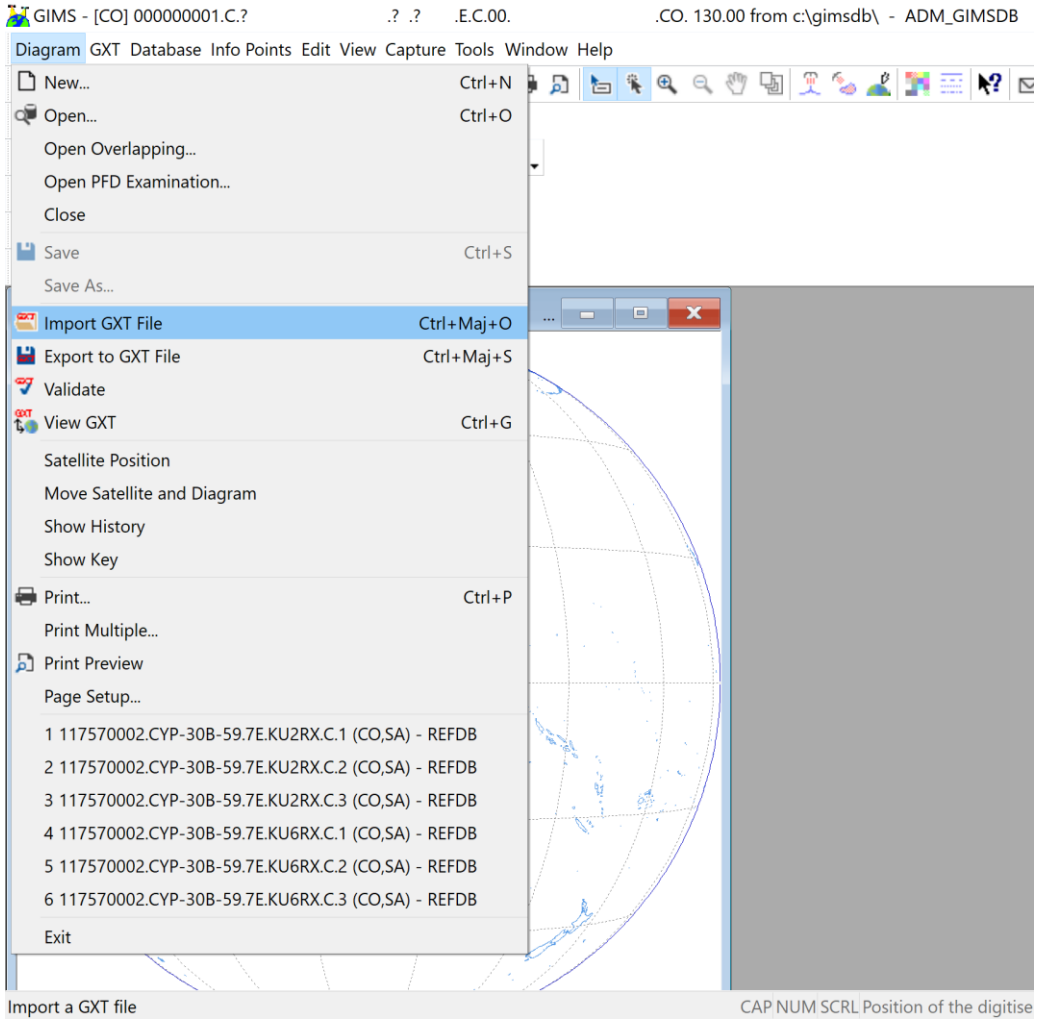
To reproduce shaped beam contours, you can use the « Click to create a new contour » tool.
With the mouse you can click on the points of the Earth where the contours pass.
Double click to close each contour.
You need to save the diagrams in your local GIMS database.



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

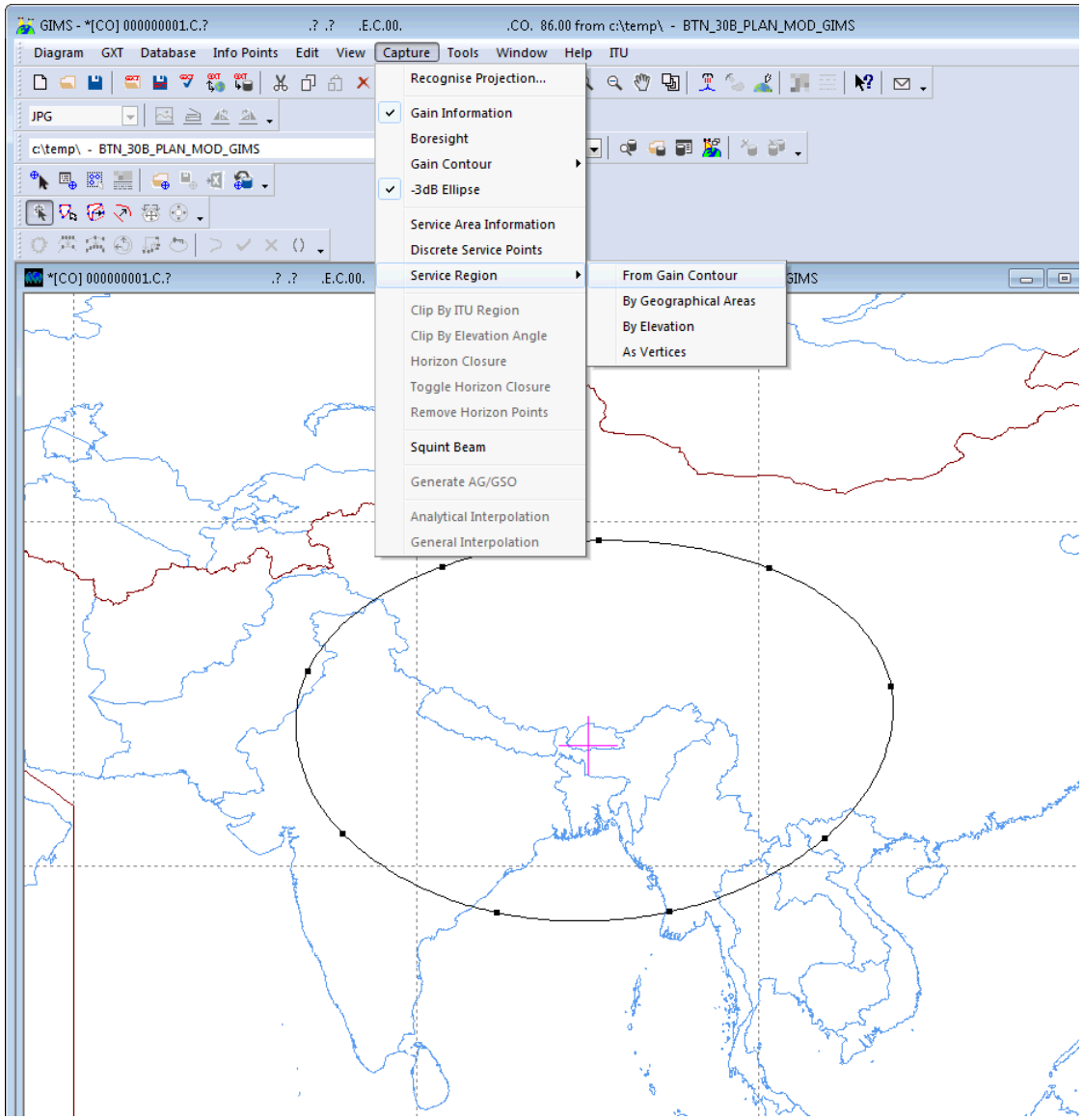
To import a shaped beam, you click on
- Diagram
- Import

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



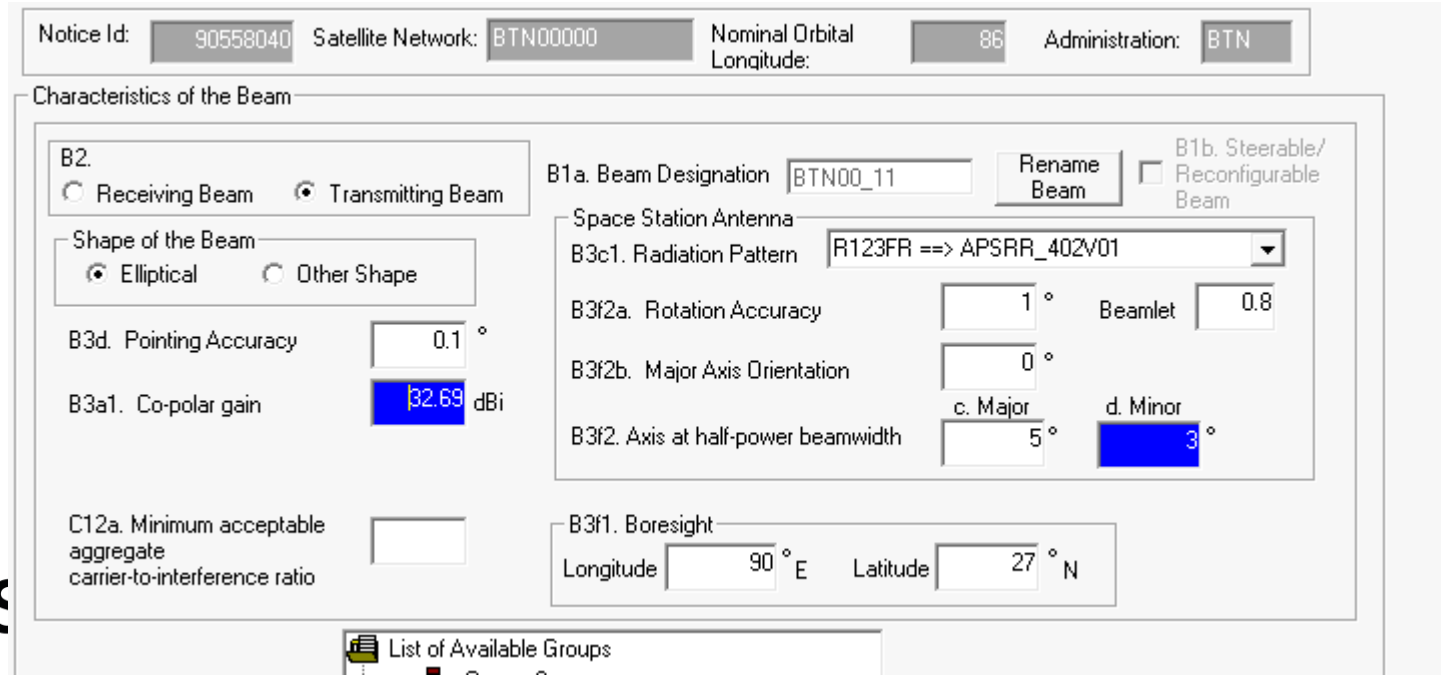
4. Define a service area

- Go to GIMS where you created you 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



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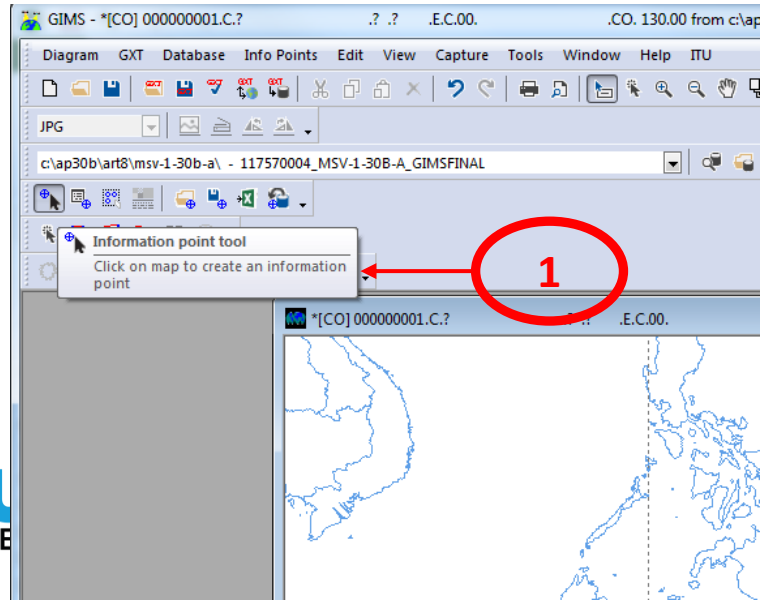
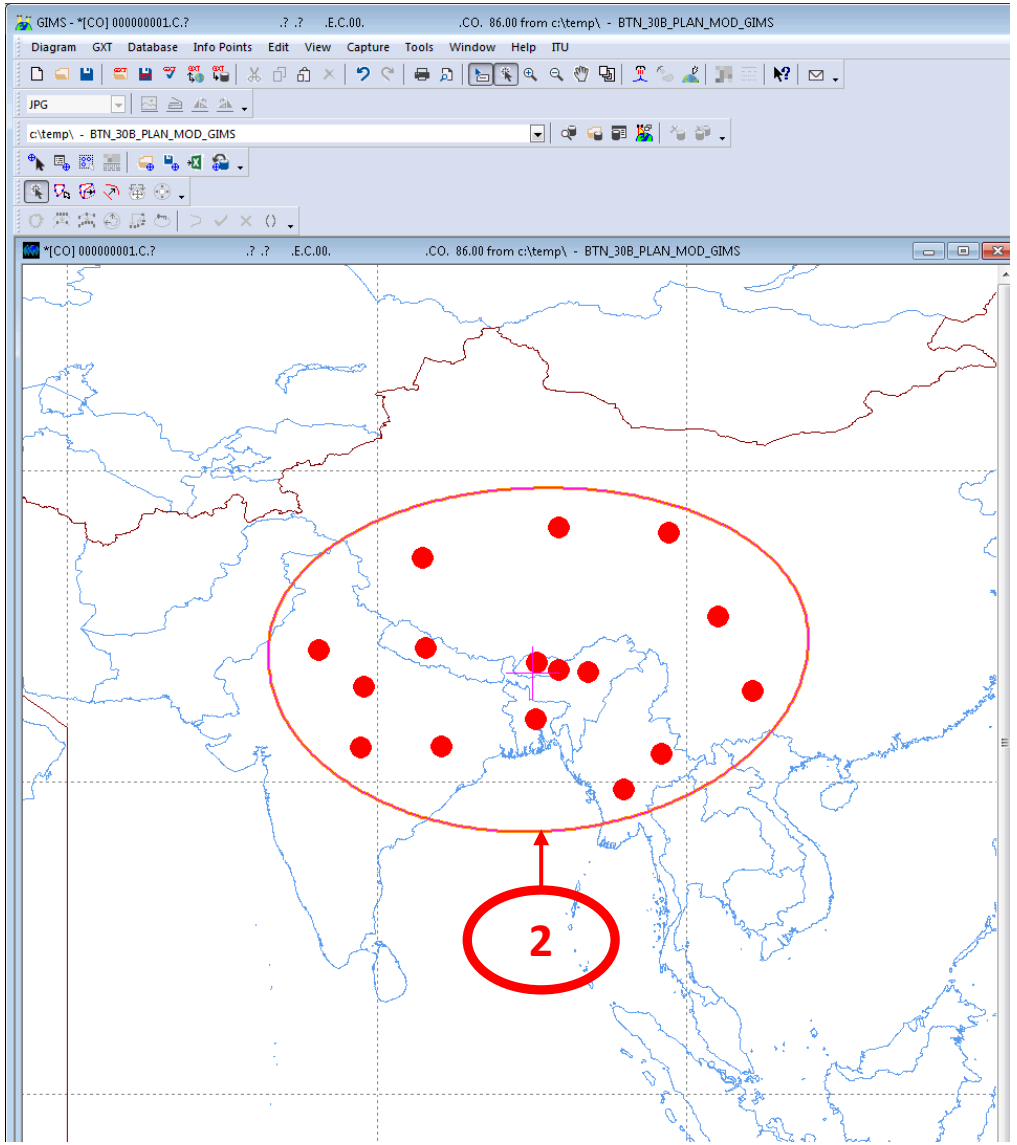
6. Select new test points…

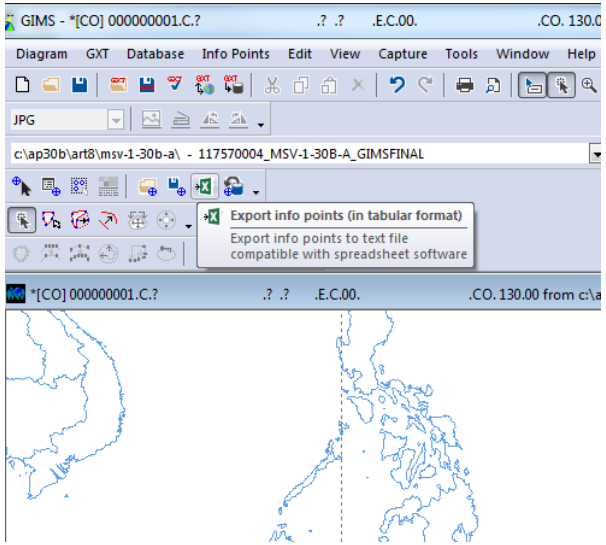
- Go to GIMS, open your service area and click on “information point tool” (**1**)
- With the mouse you click on the area where you want to add the points where the protection of your assignment will be calculated (test-points). They shall be on land and within the service area(**2**)



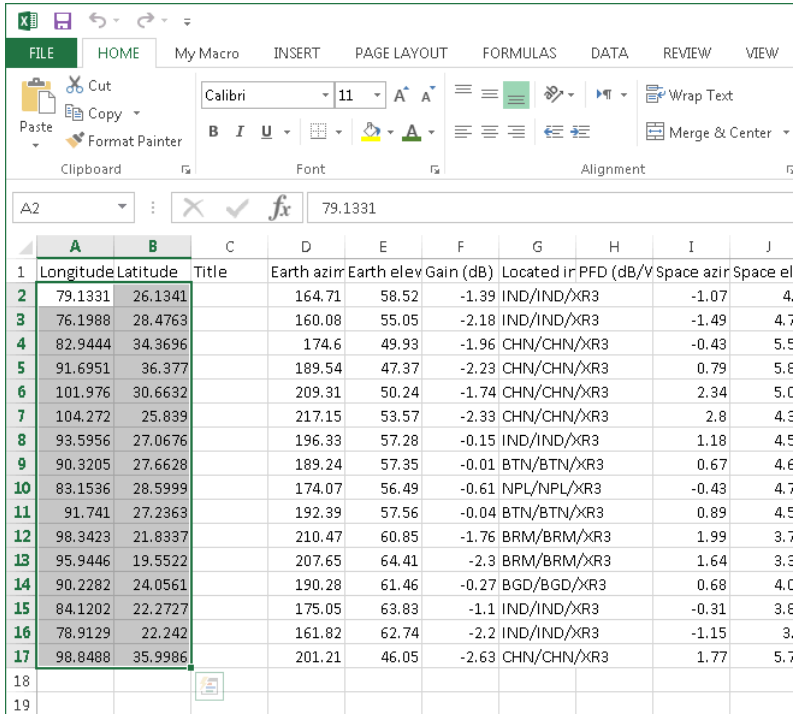


6. …and copy them in ADM_30B_Plan_Mod.mdb (1)

- 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

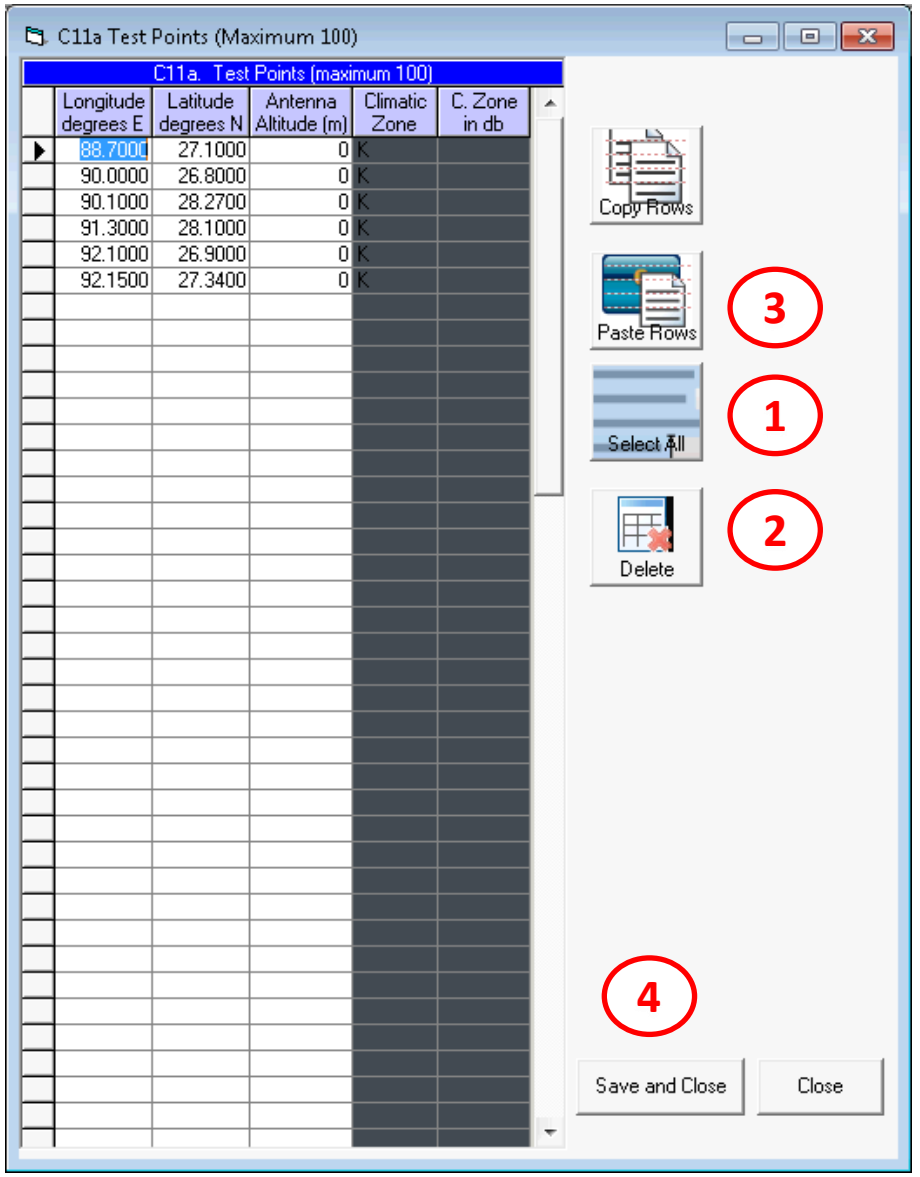


	A	B	C	D	E	F	G	H	I	J
1	Longitude	Latitude	Title	Earth azim	Earth elev	Gain (dB)	Located ir	PFD (dB/V	Space azir	Space el
2	79.1331	26.1341		164.71	58.52	-1.39	IND/IND/XR3		-1.07	4.
3	76.1988	28.4763		160.08	55.05	-2.18	IND/IND/XR3		-1.49	4.7
4	82.9444	34.3696		174.6	49.93	-1.96	CHN/CHN/XR3		-0.43	5.5
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	5.0
7	104.272	25.839		217.15	53.57	-2.33	CHN/CHN/XR3		2.8	4.3
8	93.5956	27.0676		196.33	57.28	-0.15	IND/IND/XR3		1.18	4.5
9	90.3205	27.6628		189.24	57.35	-0.01	BTN/BTN/XR3		0.67	4.6
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	4.5
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	3.3
14	90.2282	24.0561		190.28	61.46	-0.27	BGD/BGD/XR3		0.68	4.0
15	84.1202	22.2727		175.05	63.83	-1.1	IND/IND/XR3		-0.31	3.8
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										

6. …and copy them in ADM_30B_Plan_Mod.mdb (2)

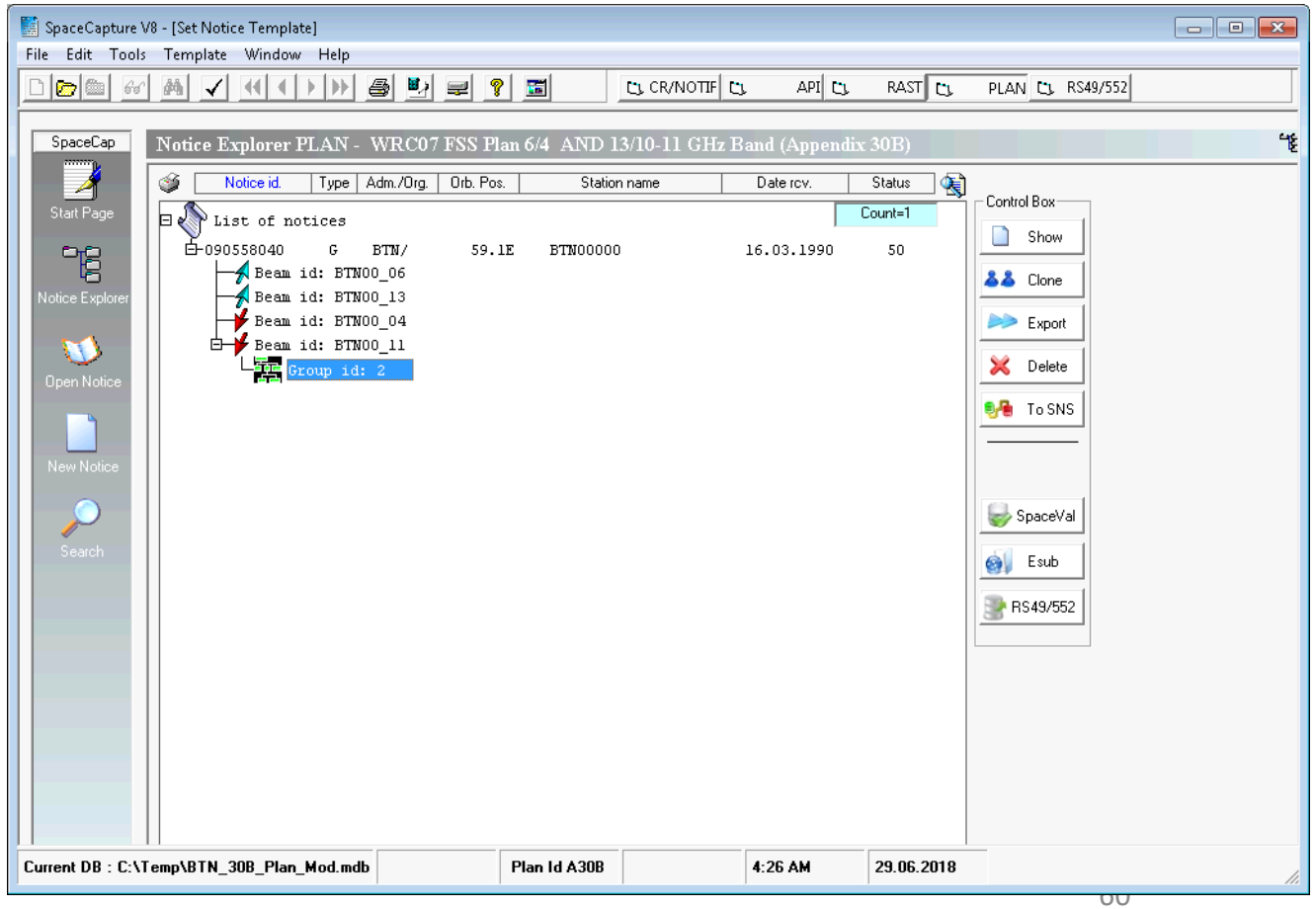
- Go to ADM_30B_Plan_Mod.mdb and click on the tab “Srv Area/Typical Antenna”
- Click on 
- Click on «Select all» (**1**)
- Click on «Delete» (**2**)
- Click on «Paste Rows» (**3**)

- Then click “**Save and Close**” (**4**) to store the new test-points into the database.



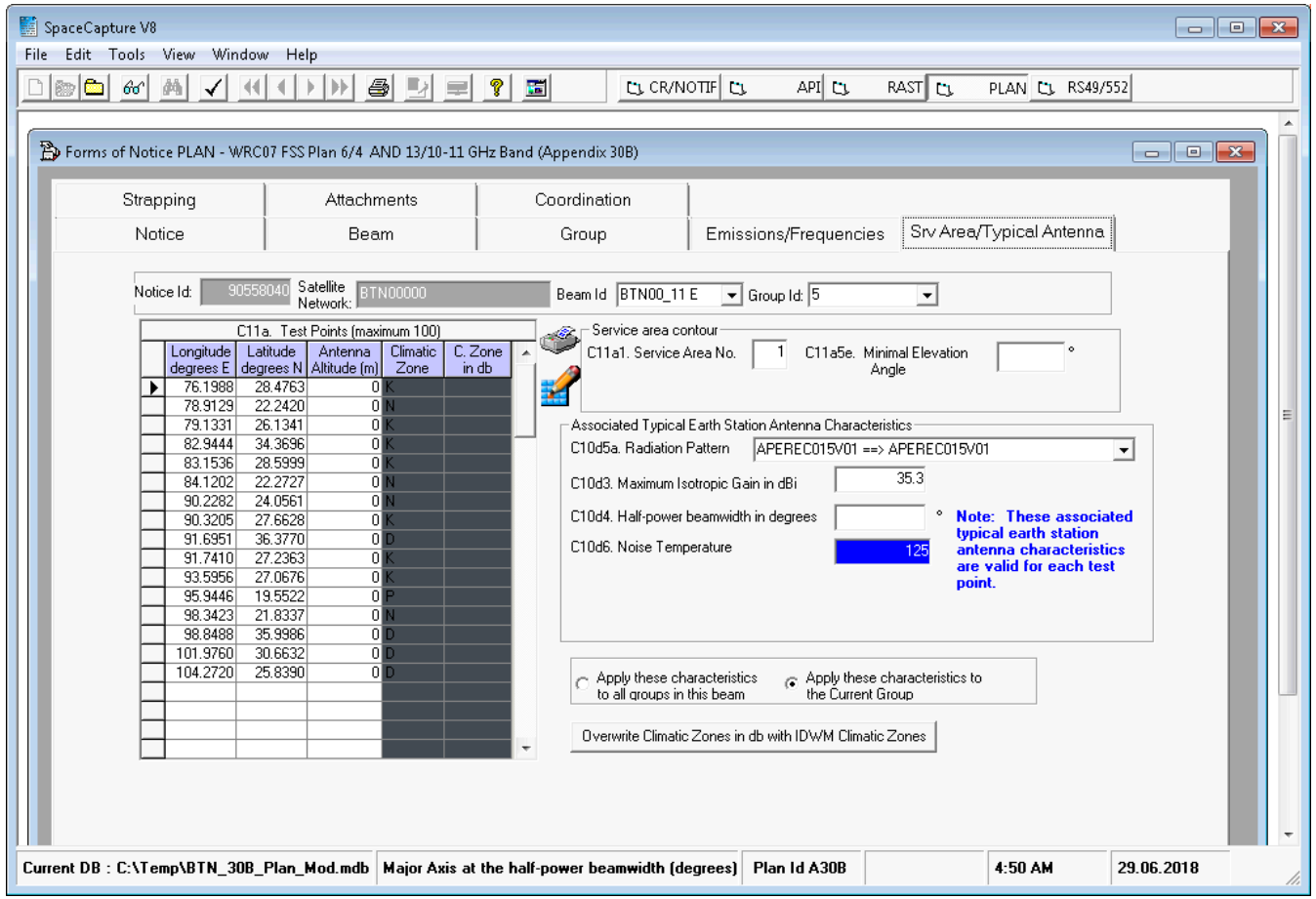
7. Create one more group by cloning the previous group (1)

- 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.

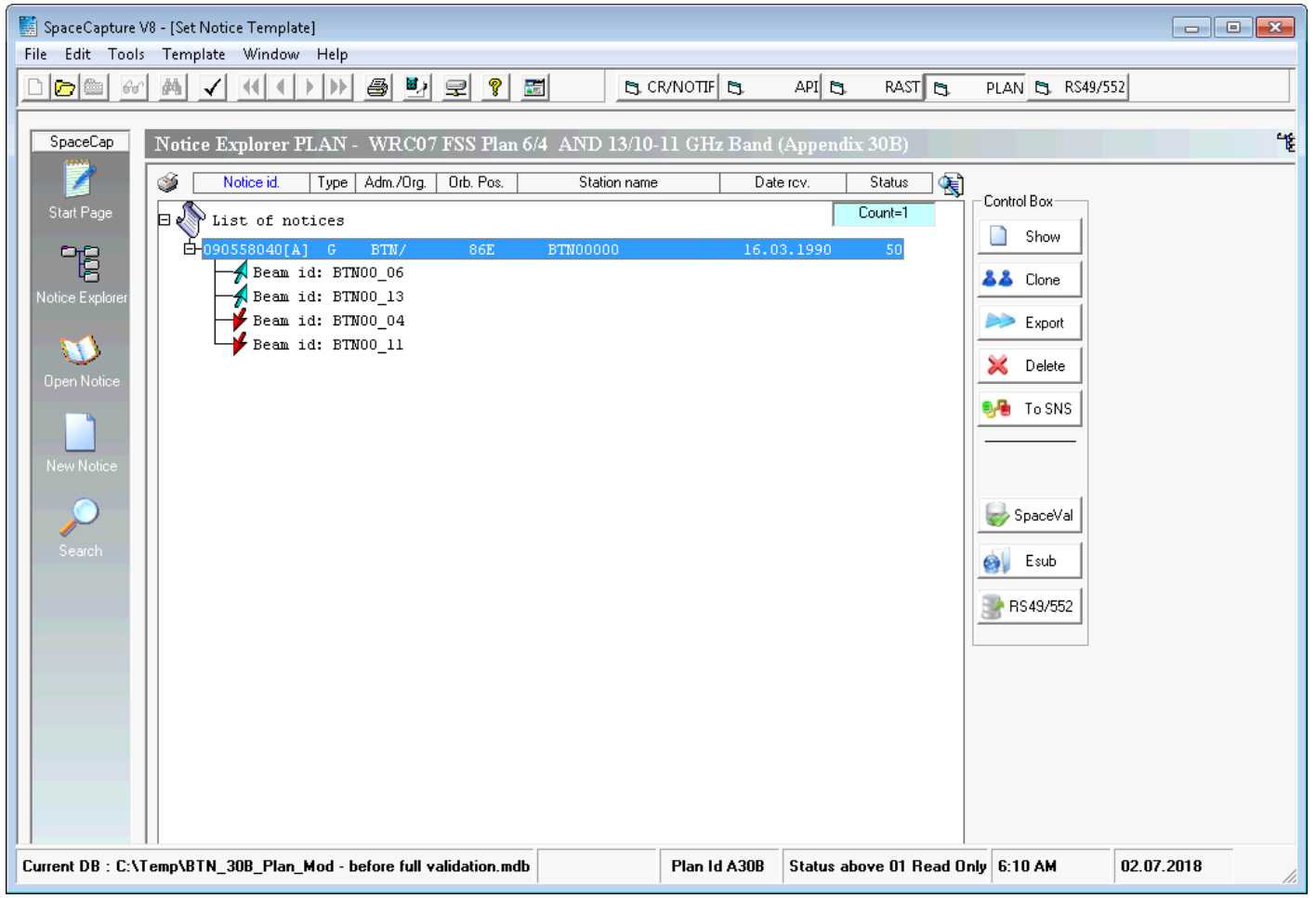


7. Create one more group by cloning the previous group (2)

- 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.



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

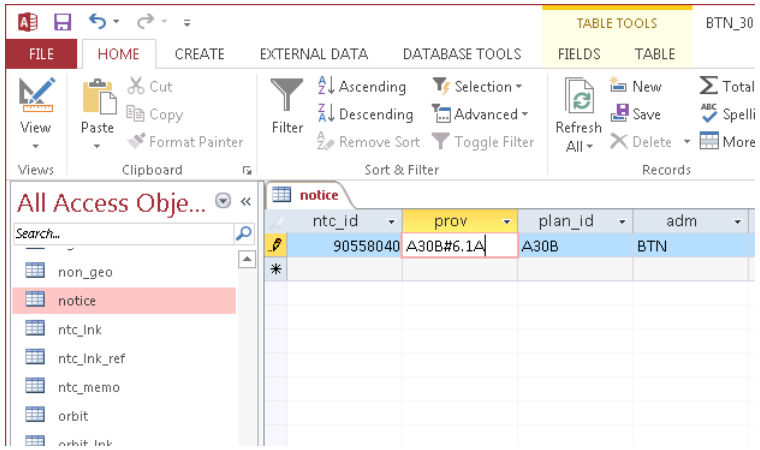


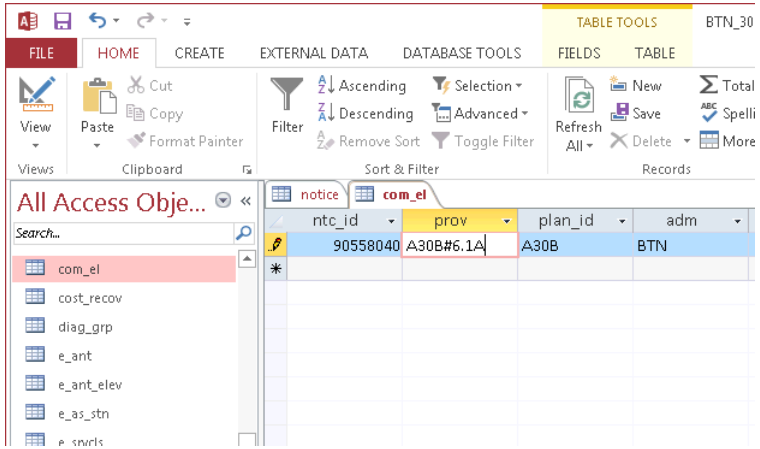
- If, for example, you don't intend do implement the C-band, then you can delete the corresponding beams.

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

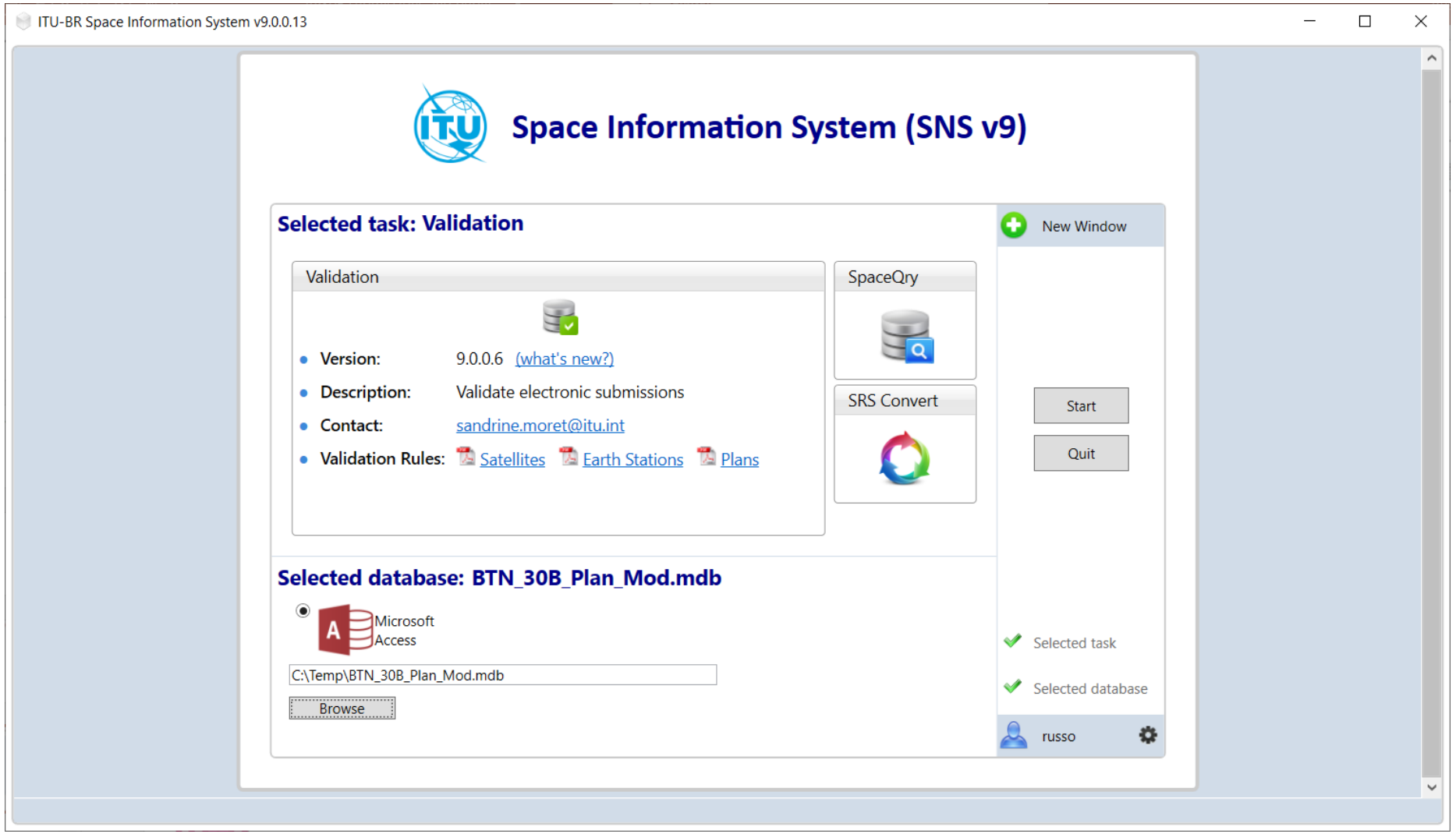
- Open the single database “**ADM_30B_Plan_Mod.mdb**” with **Ms Access**.
- Open **Notice** table and enter A30B#6.1A to column “prov”.

- Open **Com_el** table and enter A30B#6.1A to column “prov”.





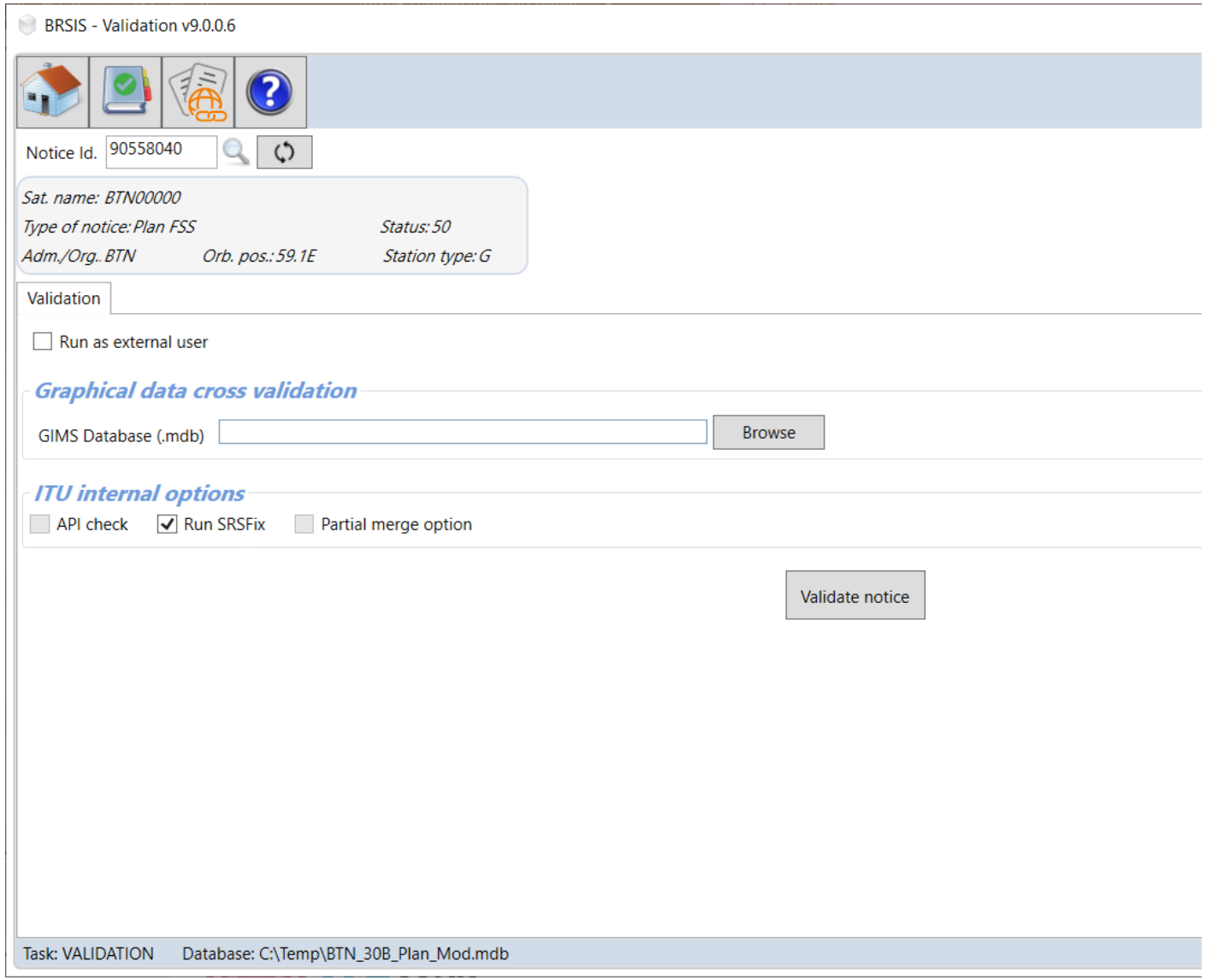
8. Run BrSis Validation to validate the new submission (2)



- 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.



9. Submit to the Radiocomunication Bureau

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

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