



SpaceCom - Comments under No.9.41

EPFD
examination tool

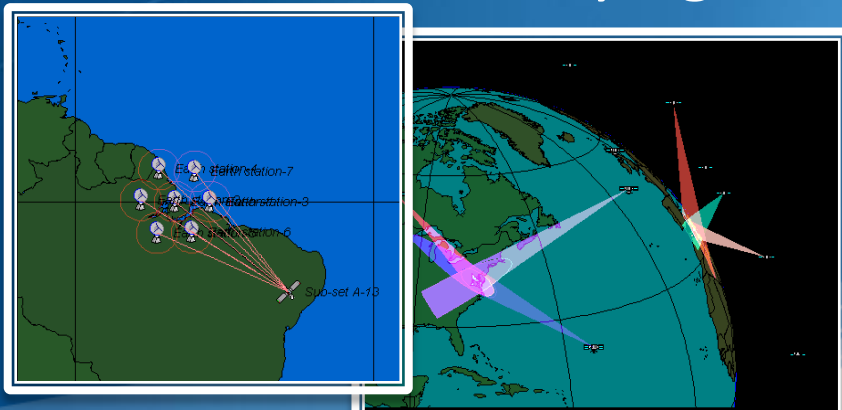
Timur Kadyrov
BR/SSD/SSC

Part 1

EPFD Examination

What is EPFD?

- Equivalent power-flux density (EPFD) takes into account the aggregate of the emissions from all non-GSO satellites in the direction of any GSO earth station, taking into account the GSO antenna directivity
- Contrary to PFD, EPFD depends on the pointing of the victim receiving antenna with respect to every source of interference
- Complex calculation methodology considers an interference varying in time and space



EPFD Limits Regulatory Framework

- **Article 22 – Hard Limits to protect GSO from Non-GSO**
 - FSS non-GSO satellite systems shall comply with the EPFD limits contained in Tables **22-1A, 22-1B, 22-1C, 22-1D, 22-1E, 22-2 and 22-3** of RR Article 22
 - ✓ Hard EPFD limits enable non-GSO FSS systems to share frequencies with and protect GSO systems without requiring individual coordinations with all the systems worldwide
- **Article 9 – coordination trigger limits**
 - specific large earth station requires coordination under RR No. **9.7A** with respect to any existing non-GSO satellite systems using the coordination triggers in RR Appendix 5; or
 - FSS non-GSO satellite systems requires coordination under RR No. **9.7B** with respect to any large earth station (under certain conditions) using the coordination triggers in RR Appendix 5.
 - ✓ Coordination trigger limits enable protection of very large specific GSO earth stations

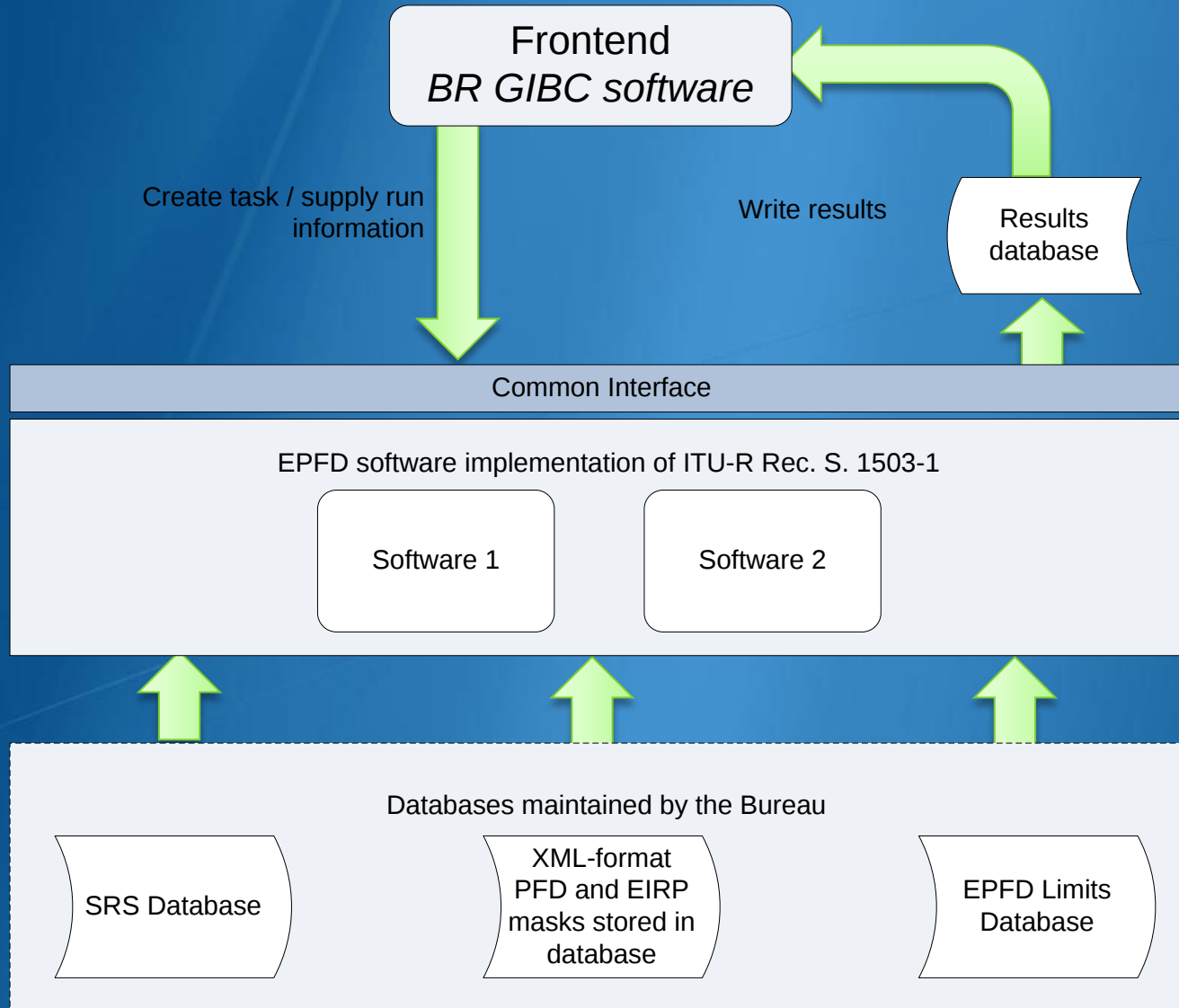
EPFD Limits Validation Tools

- Validation Software to be developed in accordance with methodology in Recommendation ITU-R S.1503-1
- Resolution 85 (WRC-03) establishes intermediate arrangements until required software is developed
- Bureau contracted two software companies to develop two independent software implementations
- Software undergoing testing; results of the testing are expected in time for Working Party 4A Meeting in May 2013

EPFD Validation – required data

- Administration have to submit:
 - “traditional” non-GSO parameters in Appendix 4 – orbit parameters, frequency assignments etc.
 - The PFD/EIRP* masks accounting for all the features of specific non-GSO systems arrangements:
 - PFD mask produced by non-GSO satellites
 - Non-GSO satellite off-axis eirp-mask to calculate interference in inter-satellite path (non-GSO – GSO)
 - Uplink off-axis eirp mask produced by non-GSO Earth Station
 - Masks are presented in XML-format
- * See also Rec. ITU-R S. 1503-1

EPFD Validation process



Part 2

Comments under No. 9.41

No. 9.41

9.41 Following receipt of the BR IFIC referring to requests for coordination under **Nos. 9.7 to 9.7B**, an administration believing that it, or any of its satellite networks not identified under **No. 9.36.2**, should have been included in the request, or the initiating administration believing that an administration, or any of the satellite networks identified under **No. 9.36.2**, in accordance with the provisions of No. 9.7 (GSO/GSO) (items 1) to 8) of the frequency band column), **No. 9.7A** (GSO earth station/non GSO system) or **No. 9.7B** (non-GSO system/GSO earth station) of **Table 5-1 of Appendix 5** should not have been included in the request, shall, within four months of the date of publication of the relevant BR IFIC, inform the initiating administration or the identified administration, as appropriate, and the Bureau, giving its technical reasons for doing so, and shall request that its name, or the name of any of its satellite networks not identified under No. 9.36.2, be included, or that the name of the identified administration, or any of its satellite networks identified under No. 9.36.2, be excluded, as appropriate. (WRC 12)

No. 9.41 – WRC-12 Decisions

- List of networks identified under No. 9.36.2 previously for information purposes only, is now **definitive** – MOD of Nos. 9.36.2, 9.41
 - Possibility to include networks even if the administration is already identified as affected under No. 9.7
- All requests for inclusion or exclusion submitted to the Bureau under No. 9.41 of Article 9 shall be submitted in electronic format compatible with the BR electronic notice form capture software (SpaceCom) – **MOD** Res. 55 (Rev. WRC-12) *Electronic submission of notice forms for satellite networks, earth stations and radio astronomy stations*

Coordination involving GSO networks

Add/Exclude Administrations/Networks under No. 9.41/9.42

- Enables addition of networks/administrations in to the coordination process under Nos. **9.7, 9.7A, 9.7B**
- For coordination process under No. **9.7 (9.7 |A|)**:
 - applicable in the frequency bands **where coordination arc is applied**
 - $\Delta T/T > 6\%$ criterion (method in Appendix 8)
 - Allows inclusion of the networks located beyond coordination arc
- Determined coordination requirements include:
 - List of additional ADMINISTRATIONS (coordination required)
 - List of additional NETWORKS ~~for information only~~ (9.36.2)

Technical reason for inclusion or exclusion under 9.7

- Use of $\Delta T/T$ - noise temperature increase due to interference at the receiver frontend
- Depends on criteria for identifying affected administrations under No. 9.7

No. 9.7 Coordination triggered using	Criteria for inclusion under No. 9.41
Coordination arc	$\Delta T/T=6\%$
$\Delta T/T=6\%$	N/A

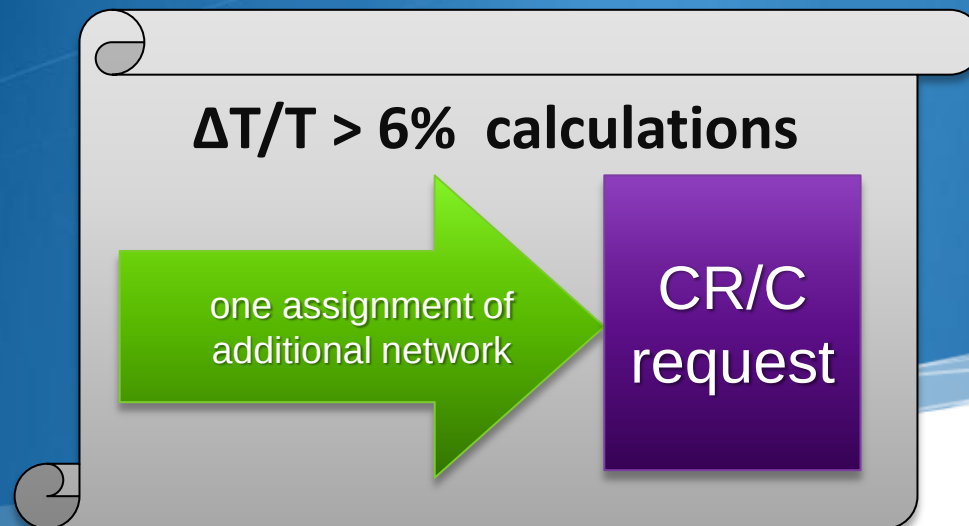


Other criteria for Adding/Excluding under 9.7

- Addition:

- (draft modified) Rule of procedure:

“...an administration wishing to be added in a coordination request under 9.41 to provide $\Delta T/T > 6\%$ calculations for only one pair of assignments for each satellite network to be further considered in the coordination process”

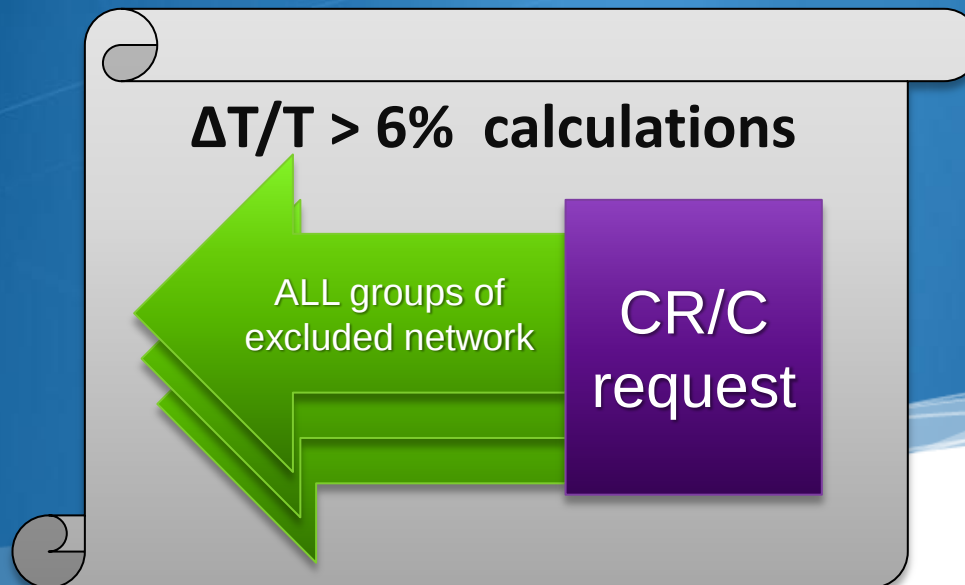


Other criteria for Adding/Excluding under 9.7

- Exclusion:

- (draft modified) Rule of procedure:

“The same information, i.e. $\Delta T/T > 6\%$ calculations for all groups of assignments of involved satellite networks, shall be submitted by an administration believing that an administration or any of its satellite networks identified under No. 9.36.2 should not have been included under No. 9.36 in the coordination request of its own satellite network”



Technical reason for inclusion or exclusion under 9.7A and 9.7B

- These provisions are covering coordination between GSO Earth Stations and non-geostationary satellite networks
- Addition/exclusion under No. 9.41 is based on:
 - Currently only using frequency overlap
 - When EPFD Validation Software is ready – would include verification of Equivalent Power Flux Densities levels produced by Non-GSOs

CR/E Publication

- CR/E Special Section is the publication containing an information on the status of the comments submitted under No. 9.41

CR/E Publication – 4 stages

1

CR/C Publication

2

Administrations have 4 months to submit
comments prepared using SpaceCom

3

Examination by the Bureau

4

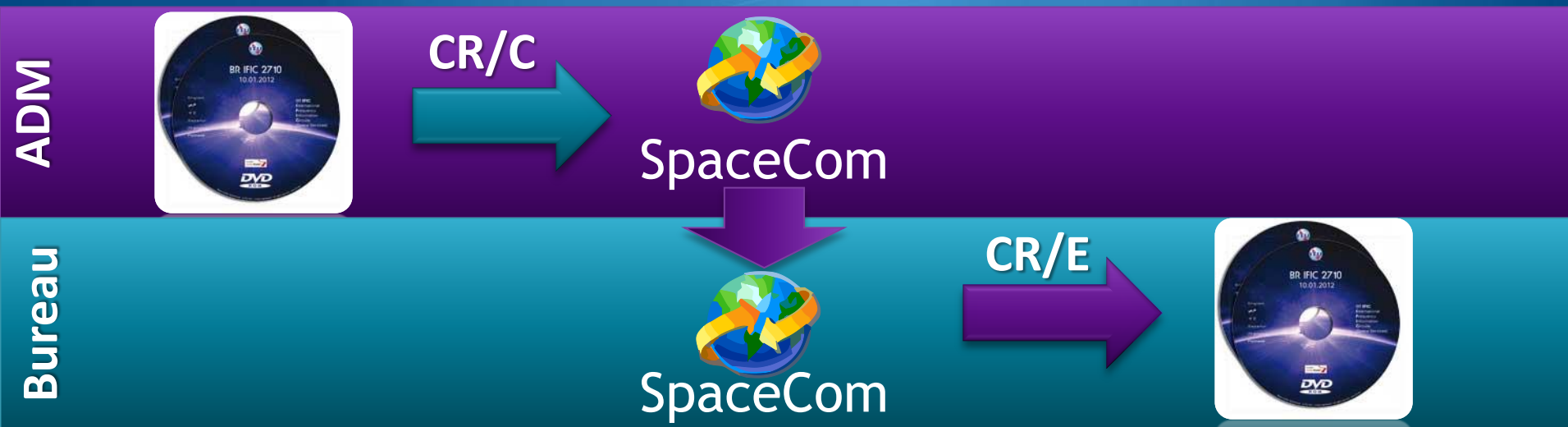
CR/E Publication

BR Examination

Request Received within 4 months	Coordination Arc Applies	DT/T Sample Provided	Requesting (Existing) adm identified under 9.7 CA for all groups	DT/T > 6%	Action
N	Y	Y	N	-	Not include
Y	N	Y	N	-	Not include
Y	Y	N	N	-	Not include
Y	Y	Y	Y	Y	Include
Y	Y	Y	N	N	Not include
Y	Y	Y	N	Y	Include

SpaceCom

- Assists administrations and BR in the management of the comments on CR/C
- Main instrument – IFIC, containing CR/C Special Section

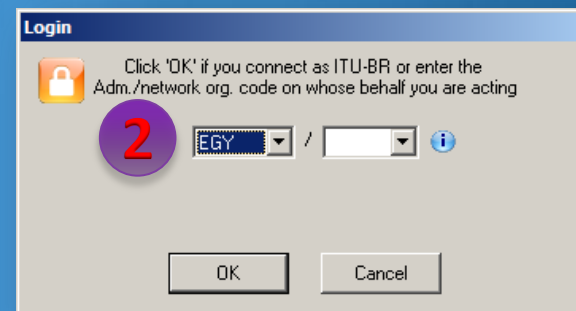
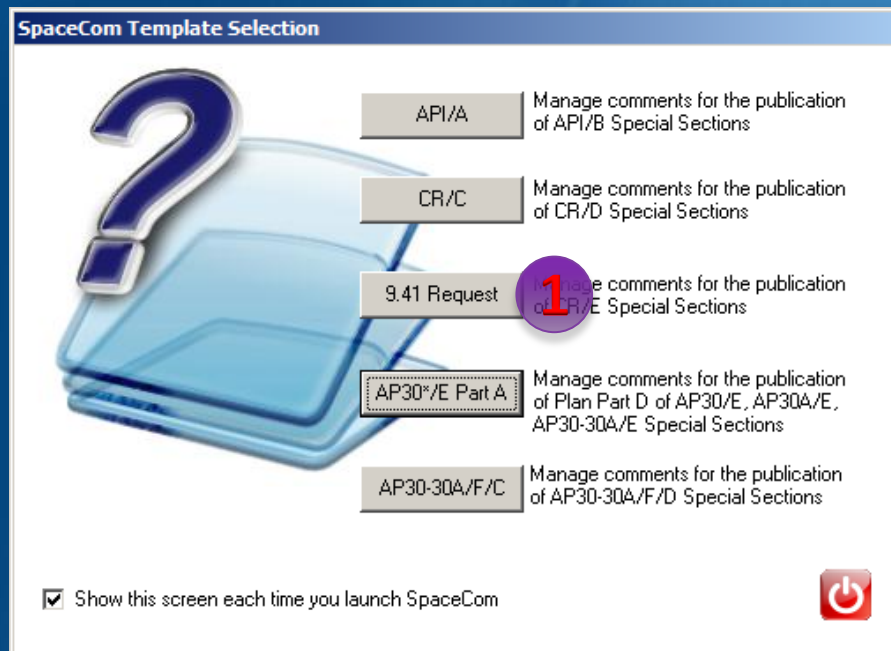




SpaceCom
Comments on CR/C for the
publication of CR/E

IN ACTION...

Capture of the comments



Capture of the comments

Who are you ?

☒ Potentially affected Administration (Commenting on a CR/C)

Operator 

☐ Notifying Administration (Commenting on an CR/C)

Pursuant to No. 9.41, any administration that is of the view that it should have been included in the request for coordination shall, within 4 months of the date of publication of the BR IFIC, request that its name be included and inform the notifying administration and the Bureau accordingly; in so doing, it shall provide a list of the satellite networks for which it is requesting coordination, along with the technical reasons.

A copy of the comments is to be sent by e-mail to the Bureau at the following address: brmail@itu.int.



Potentially affected administration wishes its name to be included in coordination process

Who are you ?

☐ Potentially affected Administration (Commenting on a CR/C)

Operator 

☒ Notifying Administration (Commenting on an CR/C)

If the notifying administration is of the view that an administration identified under No.9.36 in accordance with the provisions of No.9.7, 9.7A or 9.7B should not have been included in the request, it shall within 4 months of the date of publication of the BR IFIC request that the name of that administration be excluded from the request by informing the administration concerned and the Bureau accordingly; in so doing, it shall provide a list of the satellite networks for which such exclusion is requested, along with the technical reasons.

A copy of the comments shall be sent by e-mail to the Bureau at the following address: brmail@itu.int.



Notifying administration considers, that certain administration needs to be excluded from the list

Selecting CR/C to comment

SpaceCom v7

File Options Help

Aff. ADM

Comment

Import

Validate/Send

Not. ADM

ITU BR

Potentially affected Administration's comments under No. 9.41

1. Input information to get a list of CR/C(s) to comment

BR IFIC No. / Date **1** 2735 / 08.01.2013 Expiry date for decision 08.05.2013 **2** BR IFIC not yet published

BR IFIC database C:\My Documents\SkyDrive\WRS-12\ific2735.mdb

Administration code / network org. EGY /

Comments file location

Get list of CR/C(s)... **3**

2. Select a CR/C to comment and click 'Comment CR/C...'

	Notice id	Special section	Rev.	No.	Adm.	Org.	Satellite network	Earth station	Orb.Pos.	Comments completion	Comments last update
	113520003	CR/C/9997			AUS		SOME-NON-GEO	ES-NON-GEO	121.00	✖	
	113520002	CR/C/9998			E		NONGSO-V7		NGSO	✖	
▶	113520001	CR/C/9999			AZE		CRC-V7		40.00	✖	

?

⚠ Your comments in the current BR IFIC are not valid please check all CR/C 's as completed

Comment CR/C... Create report

In order to determine whether we can submit the comments it is advisable to review the CR/C

		UNION INTERNATIONALE DES TELECOMMUNICATIONS BUREAU DES RADIOCOMMUNICATIONS		INTERNATIONAL TELECOMMUNICATION UNION RADIOCOMMUNICATION BUREAU		UNION INTERNACIONAL DE TELECOMUNICACIONES OFICINA DE RADIOCOMUNICACIONES		© I.T.U.	
RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATELITE			CRC-V7			SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º			CR/C/9999
STATION TERRIENNE EARTH STATION ESTACION TERRENA			---			BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA			2735 / 08.01.2013
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE		AZE	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL		40 E	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NUMERO DE IDENTIFICACIÓN		113520001	
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACIÓN RECIBIDA POR LA OFICINA EL								01.01.2013	
Cette demande de coordination, reçue par le Bureau des radiocommunications en vertu du numéro 9.30 du Règlement des radiocommunications, a été examinée au titre des numéros 9.35 et 9.36 et est publiée conformément au numéro 9.38. Elle est subordonnée au type de coordination indiqué dans la colonne de gauche par un X dans la case pertinente.					This request for coordination, received by the Radiocommunication Bureau pursuant to No. 9.30 of the Radio Regulations, has been examined under Nos. 9.35 and 9.36 and is published in accordance with No. 9.38. It is subject to the form of coordination indicated in the left-hand column by an X in the relevant box		Esta solicitud de coordinación, recibida por la Oficina de Radiocomunicaciones de conformidad con el punto N° 9.30 del Reglamento de Radiocomunicaciones, se ha examinado de conformidad con los N°s 9.35 y 9.36 y se publica de conformidad con el N° 9.38. Está sujeta al formulario de coordinación indicado en la columna de la izquierda con una X en la casilla correspondiente.		
Type de coordination mentionné dans le Tableau I / Form of coordination referred to in Table I / Forma de coordinación mencionada en el cuadro I									
☒	9.7	Conformément aux numéros 9.50 à 9.52 du Règlement des radiocommunications, les Administrations identifiées dans le Tableau I ci-après sont priées de communiquer leur décision à l'Administration responsable et au Bureau avant la date limite indiquée ci-dessous.				In accordance with Nos. 9.50-9.52 of the Radio Regulations, the Administrations identified in Table I below are requested to communicate their decision to the Responsible administration and the Bureau by the deadline indicated below.		De conformidad con los N°s 9.50-9.52 del Reglamento de Radiocomunicaciones, se solicita a las administraciones señaladas en el cuadro I a continuación que comuniquen su decisión a la administración responsable y a la Oficina antes del plazo indicado más abajo.	
	9.7A								
	9.7B								
☒	AP30#7.1								
☒	AP30A#7.1								
	RS539								
	RS33#3								
Type de coordination mentionné dans le Tableau II / Form of coordination referred to in Table II / Formulario de coordinación remitido al cuadro II									
☒	9.11	Les Administrations, énumérées ou non-énumérées dans le Tableau II ci-après, qui n'acceptent pas la demande de coordination au titre des numéros 9.11 à 9.14, 9.21 et RS33#2.1, sont priées de communiquer leurs observations à l'Administration responsable et au Bureau avant la date limite indiquée ci-dessous. Toute Administration qui ne réagira pas au titre du numéro 9.52 avant cette date limite sera considérée comme n'étant pas défavorablement influencée et, dans les cas couverts par les numéros 9.11 à 9.14 et RS33#2.1, les dispositions des numéros 9.48 et 9.49 s'appliqueront.				Administrations listed or not listed in Table II below, which do not agree to the request for coordination under Nos. 9.11 to 9.14, 9.21 and RS33#2.1 are requested to communicate their comments to the responsible administration and the Bureau by the deadline indicated below. Any administration not responding under No. 9.52 within this deadline shall be regarded as unaffected and, in the cases of Nos. 9.11 to 9.14 and RS33#2.1, the provisions of Nos. 9.48 and 9.49 shall apply.		Se invita a las administraciones, enumeradas o no en el cuadro II, que no estén de acuerdo con la solicitud de coordinación de conformidad con los N°s 9.11 a 9.14, 9.21 y RS33#2.1 que comuniquen sus observaciones a la administración responsable y a la Oficina dentro del plazo indicado más abajo. Se considerará que toda administración que no responda de conformidad con el N° 9.52 dentro del plazo señalado, no está afectada y, en el caso de los N°s 9.11 a 9.14 y RS33#2.1, se aplicarán las disposiciones de los N°s 9.48 y 9.49.	
☒	9.11A								
	9.12								
	9.12A								
☒	9.13								
	9.14								
	9.21/A								
	9.21/B								
	9.21/C								
	RS33#2.1								
DATE LIMITE POUR LA DÉCISION / EXPIRY DATE FOR DECISION / FECHA LÍMITE PARA LA DECISIÓN								08.05.2013	

Administration is already identified as affected under 9.7?

Tableau/Table/Cuadro I		
Résumé des conditions régissant la coordination Summary of coordination requirements Resumen de los requisitos de coordinación		
Disposition Provision Disposición		
X 9.7		ARG, ARS/ARB, ARS, AUS, AZE, B, BEL, BGD, CAN, CHN, CLM, CYP, D, E, EGY, F/EUT, F, G, GRC, HOL, I, IND, INS, ISR, J, KAZ, KOR, LUX, MLA, NOR, NRU, PAK, PNG, QAT, RUS/IK, RUS, S, THA, TON, TUR, UKR, USA, VTN
9.7A		
9.7B		
X AP30#7.1		ISR, PNG
X AP30A#7.1		CHN, ISR, PNG, PRG, RUS/IK
RS539		
RS33#3		

- Yes, administration is already identified as affected, but question remains:
 - All the potentially affected networks (in our view) are listed in CR/C publication?

Which networks are affected?

II. Liste des réseaux à satellite
(à titre d'information uniquement, voir N° 9.36.2)

II. List of satellite networks
(for information only, see No. 9.36.2)

II. Lista de redes de satélite
(sólo para información, véase el N.º 9.36.2)

Liste des réseaux à satellite pour lesquels Delta T/T > 6% ou situés à l'intérieur de l'arc de coordination (au titre du N° 9.7)

List of satellite networks for which Delta T/T > 6% or which are within the coordination arc (under No. 9.7)

Lista de redes de satélite para las que Delta T/T > 6% o que están dentro del arco de coordinación (según N.º 9.7)

A1f1 Notifying adm.	A1f3 Inter. sat. org.	A1a Sat. Network	A4a1 Orbital long.	BR3b Category of notif.	BR25 A/T	BR6a Id. no.	BR26 Causing interference	BR27 Receiving interference	BR28 Detected by coord. arc
ARG		ARSAT-C	81 W	C	A	110520406	C	R	
ARS		ARSAT-B1	30.5 E	C	A	105520072		R	
		SECOMSAT-B1	29 E	C	A	108520282		R	
EGY		NAVISAT-11A	28.25 E	C	A	109520317	C	R	
		NAVISAT-12A	35.5 E	C	A	109520318			A
		NAVISAT-14A	44 E	C	A	109520319			A
		NAVISAT-2A	21 E	C	A	109520315	C	R	
		NAVISAT-7A	1 E	C	A	110520449	C		
		NAVISAT-9A	14 E	C	A	109520316	C		
	EUT	EUTELSAT 3-70.5E	70.5 E	C	A	95520027			
		EUTELSAT-E-70.5E	70.5 E	N	A	103500277			
		EUTELSAT-E-70.5E	70.5 E	C	A	94520125			
		EUTELSAT-E-70.5E	70.5 E	N	A	103500079			
		ASAT-P1B	2.8 W	C	A	111520227			
		ASAT-P2B	25 E	C	A	111520228	C		
		ASAT-P3B	31.2 E	C	A	111520229	C		
		ATHENA-FIDUS-23.7E	23.7 E	C	A	109520081	C	R	
		ATHENA-FIDUS-25E	25 E	C	A	108520320	C	R	
		ATHENA-FIDUS-31E	31 E	C	A	109520082	C	R	
		ATHENA-FIDUS-38E	38 E	C	A	109520083	C	R	

Detected by
coordination
arc

- We believe that there are some additional networks beyond coordination arc which are affected (i.e. $\Delta T/T$ exceeds 6%). However, these networks are missing in the list.

Selecting CR/C to comment

SpaceCom v7

File Options Help

Aff. ADM

Comment

Import

Validate/Send

Potentially affected Administration's comments under No. 9.41

1. Input information to get a list of CR/C(s) to comment

BR IFIC No. / Date **1** 2735 / 08.01.2013 Expiry date for decision 08.05.2013 **2** BR IFIC not yet published

BR IFIC database C:\My Documents\SkyDrive\WRS-12\ific2735.mdb

Administration code / network org. EGY /

Comments file location

Get list of CR/C(s)... **3**

2. Select a CR/C to comment and click 'Comment CR/C...'

	Notice id	Special section	Rev.	No.	Adm.	Org.	Satellite network	Earth station	Orb.Pos.	Comments completion	Comments last update
	113520003	CR/C/9997			AUS		SOME-NON-GEO	ES-NON-GEO	121.00	✖	
	113520002	CR/C/9998			E		NONGSO-V7		NGSO	✖	
▶	113520001	CR/C/9999			AZE		CRC-V7		40.00	✖	

4

⚠ Your comments in the current BR IFIC are not valid please check all CR/C 's as completed

Comment CR/C... **5** Create report

Not. ADM

ITU BR

Addition of the networks

SpaceCom v7

File Options Help

Aff. ADM

Comment

Import

Validate/Send

Potentially affected Administration's comments under No. 9.41

CR/C information

Provision Special Section Adm./ntwk. org. Satellite network Orb. pos.

9.7IAI; 9.7AIFI; 9.7BIFI CR/C/9999 ATA CRC-V7 40.00

Comments NOT completed 12.11.2012

1. Enter your comments by filling the relevant boxes

Satellite name	Delta T/T or Other calc.	9.7 IAI	9.7A IFI	Adm. comments
NILESAT-301-7W	☒	☒	☐	wants to be added
NILESAT-A	☒	☒	☐	wants to be added
NILESAT-B	☒	☒	☐	wants to be added
NILESAT-C	☒	☒	☐	wants to be added
NILESAT-D	☒	☒	☐	wants to be added
NILESAT-E	☒	☒	☐	wants to be added

Earth station name	Delta T/T or Other calc.	9.7B IFI	Adm. comments
*	☐	☐	

Remark: dT/T calculations are attached in the file 'DToverT_Calculations.doc'

2. Click 'Check Comments completed' when you have finished with all your entries

Select a new CR/C... Save Check Comments completed Create report

Do not include the calculation results into the remarks. Attachments could be referred there

Delta T/T or other calculation has to be attached to the request, otherwise the request will be rejected !

Exclusion of the networks

SpaceCom v7

File Options Help

Aff. ADM
Not. ADM

Comment
Validate/Send

Notifying Administration requesting Exclusion of an Administration/Network under No. 9.41

1. Input information to get a list of CR/C(s) to comment

BR IFIC No. / Date 2735 / 08.01.2013 Expiry date for decision 08.05.2013 BR IFIC not yet published

BR IFIC database C:\My Documents\SkyDrive\WRS-12\ific2735.mdb

Administration code / network org. AZE /

Comments file location

Get list of CR/C(s)...

2. Select a CR/C to comment and click 'Comment CR/C...'

	Notice id.	Special section	Rev.	No.	Adm.	Org.	Satellite network	Earth station	Orb.Pos.	Comments completion	Comments last update
▶	113520001	CR/C/9999			AZE		CRC-V7		40.00	⌘	

Your comments in the current BR IFIC are not valid please check all CR/C 's as completed

Comment CR/C...

Create report

ITU BR

Exclusion of the networks

SpaceCom v7

File Options Help

Aff. ADM
Not. ADM

Comment
Validate/Send

Notifying Administration requesting Exclusion of an Administration/Network under No. 9.41

CR/C information

Provision	Special Section	Adm./ntwk. org.	Satellite network	Orb. pos.	Comments NOT completed ☐
9.7IAI; 9.7AIFI; 9.7BIFI	CR/C/9999	AZE	CRC-V7	40.00	

1. Enter your comments by filling the relevant boxes

Satellite name	Delta T/T or Other calc.	9.7IAI	9.7AIFI	Adm. comments
EUTELSAT-E-70.5E	☒	☒	☐	wants to remove
DEF-R-SAT-2A	☒	☒	☐	wants to remove
*	☐	☐	☐	

Earth station name	Delta T/T or Other calc.	9.7BIFI	Adm. comments
*	☐	☐	

Remark:

2. Click 'Check Comments completed' when you have finished with all your entries

Select a new CR/C... Save ☒ Check Comments completed Create report

ITU BR

Before you finish...

SpaceCom v7
File Options Help

Potentially affected Administration's comments under No. 9.41

1. Input information to get a list of CR/C(s) to comment

BR IFIC No. / Date  2735 / 08.01.2013 Expiry date for decision 08.05.2013  BR IFIC not yet published

BR IFIC database C:\My Documents\SkyDrive\WRS-12\ific2735.mdb 

Administration code / network org. EGY /

Comments file location C:\SpaceCom_Comments\CRE_comments\IFIC2735\AffADM\CRE-IFIC2735_EGY.mdb

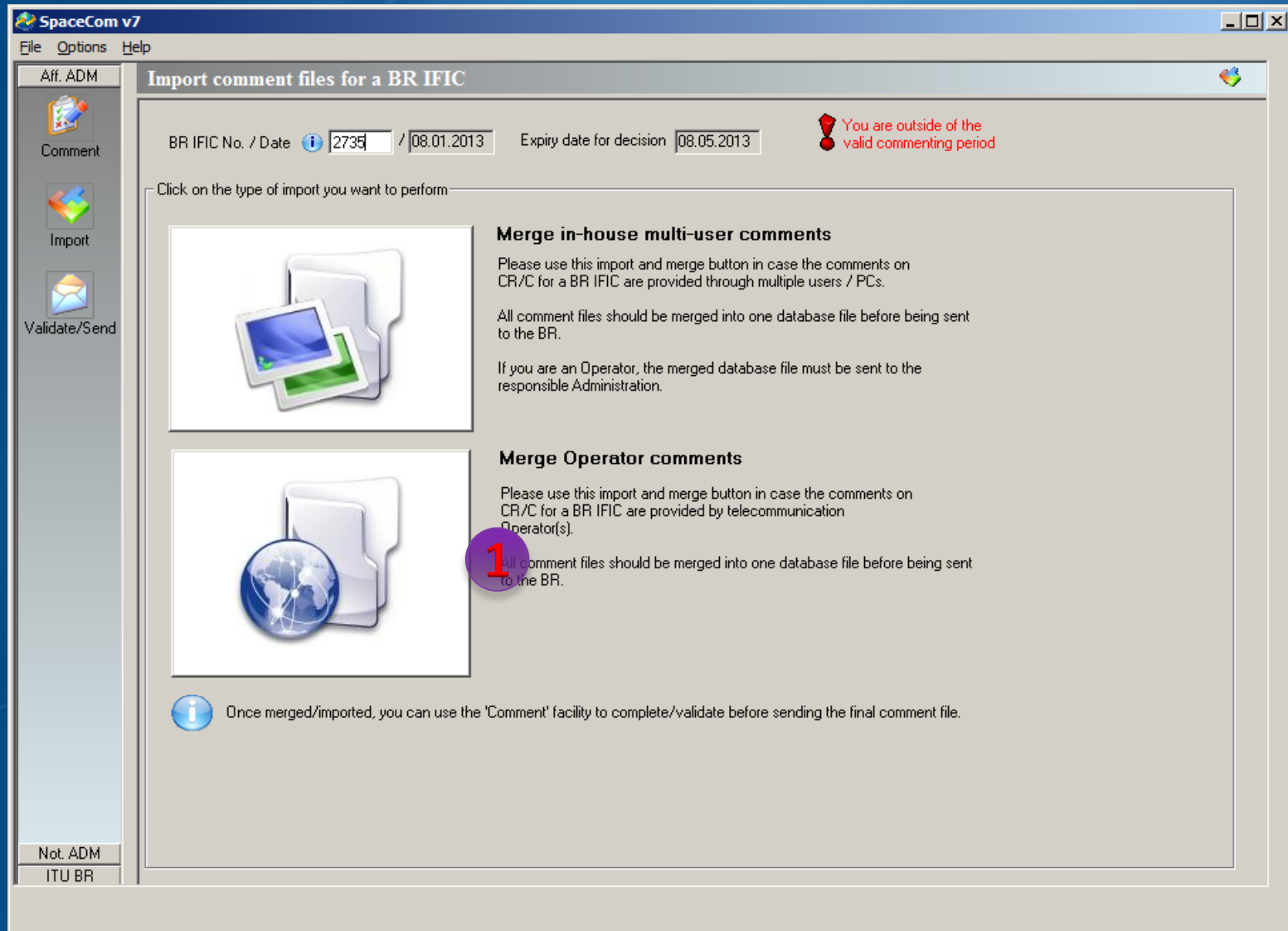
2. Select a CR/C to comment and click 'Comment CR/C...'

	Notice id.	Special section	Rev.	No.	Adm.	Org.	Satellite network	Earth station	Orb.Pos.	Comments completion	Comments last update
	113520003	CR/C/9997			AUS		SOME-NON-Geo	ES-NON-Geo	121.00	✓	12.11.2012 14:23:11
	113520002	CR/C/9998			E		NONGSO-V7		NGSO	✓	12.11.2012 14:23:11
▶	113520001	CR/C/9999			AZE		CRC-V7		40.00	✓	12.11.2012 14:23:11

 Create report

Left sidebar: Aff. ADM, Comment, Import, Validate/Send, Not. ADM, ITU BR

Merge comments from different operators...



...validate...

SpaceCom v7

File Options Help

Aff. ADM

Comment

Import

Validate/Send

Not. ADM

ITU BR

Validate and send your comments under No. 9.41 database to BR

BR IFIC No. / Date **1** 2735 / 08.01.2013 Expiry date for decision 08.05.2013  You are outside of the valid commenting period

File location C:\SpaceCom_Comments\CRE_comments\IFIC2735\AffADM\CRE-IFIC2735_EGY.mdb **2** 

1. Validate file before sending

File validation **3**

Validation OK

2. Attachments

 Don't forget to attach Delta T/T or other calculation to the request. Otherwise the request will be rejected.

SpaceCom

 View report on the status of all your comments?

Yes No

3. Send your comments

 Create e-mail with MS Outlook...

 If you don't have Microsoft Outlook, please send to 'brmail@itu.int' the comments file indicated above using your own messaging management program.

...add attachments and send...

SpaceCom v7
File Options Help

Aff. ADM

Comment
Import
Validate/Send

Validate and send your comments under No. 9.41 database to BR

BR IFIC No. / Date  2735 / 08.01.2013 Expiry date for decision 08.05.2013  You are outside of the valid commenting period

File location C:\SpaceCom_Comments\CRE_comments\IFIC2735\AffADM\CRE-IFIC2735_EGY.mdb 

 **Don't forget to attach Delta T/T or other calculation to the request. Otherwise the request will be rejected.**

1. Validate file before sending

File validation

Validation OK

2. Attachment(s)

C:\DT over T Calculations.doc   **1**

3. Send your comments

 Create e-mail with MS Outlook... **2**

 If you don't have Microsoft Outlook, please send to 'brmail@itu.int' the comments file indicated above using your own messaging management program.

Not. ADM
ITU BR

Case of coordination under 9.7B

SpaceCom v7
File Options Help

Potentially affected Administration's comments under No. 9.41

1. Input information to get a list of CR/C(s) to comment

BR IFIC No. / Date: **1** 2735 / 08.01.2013 Expiry date for decision: 08.05.2013 **2**  BR IFIC not yet published

BR IFIC database: C:\My Documents\SkyDrive\WRS-12\ific2735.mdb

Administration code / network org. G /

Comments file location:

Get list of CR/C(s)... **3** 

2. Select a CR/C to comment and click 'Comment CR/C...'

	Notice id.	Special section	Rev.	No.	Adm.	Org.	Satellite network	Earth station	Orb.Pos.	Comments completion	Comments last update
	113520003	CR/C/9997			AUS		SOME NON-GEOS	ES-NON-GEOS	121.00	%	
▶	113520002	CR/C/9998			E		NONGSO-V7		NGSO	%	
	113520001	CR/C/9999			AZE		CBC-V7		40.00	%	

 Your comments in the current BR IFIC are not valid please check all CR/C 's as completed

Not. ADM
ITU BR

Comment CR/C... **4**  Create report

Addition of potentially affected Earth Stations under 9.7B

SpaceCom v7

File Options Help

Aff. ADM

Comment

Import

Validate/Send

Not. ADM

ITU BR

Potentially affected Administration's comments under No. 9.41

CR/C information

Provision: 9.7IAI; 9.7AIF; 9.7BIF Special Section: CR/C/9998 Adm./ntwk. org: E Satellite network: NONGSO-V7 Orb. pos.: NGSO

Comments NOT completed 12.11.2012

1. Enter your comments by filling the relevant boxes

Satellite name	Delta T/T or Other calc.	9.7 IAI	9.7A IFI	Adm. comments
* [dropdown]	☐	☐	☐	

In this case we are adding Earth Station having frequency overlap with the new non-GSO network

Earth station name	Delta T/T or Other calc.	9.7B IFI	Adm. comments
▶ MENWITH HILL-1A	☒	☒	wants to be added
MENWITH HILL-E1	☒	☒	wants to be added
* [dropdown]	☐	☐	

Remark: [text area]

2. Click 'Check Comments completed' when you have finished with all your entries

Select a new CR/C... Save Check Comments completed Create report

Delta T/T or other calculation has to be attached to the request, otherwise the request will be rejected !

Case of coordination under 9.7A

SpaceCom v7

File Options Help

Aff. ADM

Comment

Import

Validate/Send

Not. ADM

ITU BR

Potentially affected Administration's comments under No. 9.41

1. Input information to get a list of CR/C(s) to comment

BR IFIC No. / Date **1** 2735 / 08.01.2013 Expiry date for decision 08.05.2013 **2** BR IFIC not yet finished

BR IFIC database C:\My Documents\SkyDrive\WRS-12\ific2735.mdb

Administration code / network org. CAN /

Comments file location

Get list of CR/C(s)... **3**

2. Select a CR/C to comment and click 'Comment CR/C...'

	Notice id.	Special section	Rev.	No.	Adm.	Org.	Satellite network	Earth station	Orb.Pos.	Comments completion	Comments last update
▶	113520003	CR/C/9997			AUS		SOME-NON-Geo	ES-NON-Geo	121.00	⌘	
	113520002	CR/C/9998			E		NON-Geo-V7		NGSO	⌘	
	113520001	CR/C/9999			AZE		CRC-V7		40.00	⌘	

⚠ Your comments in the current BR IFIC are not valid please check all CR/C 's as completed

Comment CR/C... **4** Create report

Addition of potentially affected Non-GSO system under 9.7A

SpaceCom v7

File Options Help

Alt. ADM

Comment

Import

Validate/Send

Potentially affected Administration's comments under No. 9.41

CR/C information

Provision	Special Section	Adm./ntwk. org.	Earth station	Orb. pos.	Comments NOT completed ☐
9.7IAI; 9.7AIFI; 9.7BIFI	CR/C/9997	AUS	ES-NON-GE0		12.11.2012

1. Enter your comments by filling the relevant boxes

Satellite name	Delta T/T or Other calc.	9.7 IAI	9.7A IFI	Adm. comments
CANPOL	☒	☐	☒	wants to be added
CASCADE-CX	☒	☐	☒	wants to be added
*	☐			

Adding Non-GSO system having frequency overlap with the new Large earth station

Earth station name	Delta T/T or Other calc.	9.7B IFI	Adm. comments
*	☐	☐	

Remark:

2. Click 'Check Comments completed' when you have finished with all your entries

Select a new CR/C... Save ☒ Check Comments completed Create report

Not. ADM
ITU BR

Delta T/T or other calculation has to be attached to the request, otherwise the request will be rejected !

CR/E Publication



UNION INTERNATIONALE DES TÉLÉCOMMUNICATIONS
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

© I.T.U.

RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATÉLITE		AMS-CK-43E		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º		CR/E/239
STATION TERRIENNE EARTH STATION ESTACIÓN TERRENA		---		BR IFIC / DATE BR IFIC / DATE BR IFIC / FECHA		2726 / 21.08.2012
ADM. RESPONSABLE RESPONSIBLE ADM. ADM. RESPONSABLE	ISR	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	43 E	NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NUMERO DE IDENTIFICACIÓN		111520388

X	9.41/9.7	1. La présente Section spéciale est publiée conformément au numéro 9.42 du Règlement des radiocommunications, en ce qui concerne la demande de coordination publiée dans la Section spéciale CR/C citée en référence au bas de cette page.	1. This Special Section is published in accordance with No. 9.42 of the Radio Regulations, in respect of the request for coordination published in the CR/C Special Section referenced at the bottom of this page.	1. Esta Sección Especial se publica de conformidad con el número 9.42 del Reglamento de Radiocomunicaciones al respecto de la solicitud de coordinación publicada en la Sección Especial CR/C indicada al final de esta página.
	9.41/9.7A	2. Les administrations qui ont soumis des observations au titre du numéro 9.41 dans les quatre mois qui ont suivi la publication des Sections spéciales susmentionnées, en ce qui concerne la forme de la coordination indiquée dans la colonne de gauche par un X dans la case appropriée, sont énumérées dans le Tableau 1 ci après.	2. Administrations that have submitted comments under No. 9.41 within four months of the date of publication of the mentioned CR/C Special Sections, with respect to the form of coordination indicated in the left-hand column by an X in the relevant box, are listed in Table-I, below.	2. Las Administraciones que han presentado comentarios con arreglo al número 9.41 en el plazo de cuatro meses a partir de la fecha de publicación de la mencionada Sección Especial CR/C, con respecto al formulario de coordinación indicado en la columna izquierda introduciendo una X en la casilla correspondiente, se indican en el Cuadro-I, que aparece más adelante.
	9.41/9.7B			

RÉFÉRENCE DE LA SECTION SPÉCIALE (BR IFIC / DATE)
SPECIAL SECTION REFERENCE (BR IFIC / DATE)
REFERENCIA DE LA SECCIÓN ESPECIAL (BR IFIC / FECHA)

CR/C/3029 (BR IFIC 2715 / 20.03.2012)

CR/E Publication

Tableau I / Table I / Cuadro I / 表一 / Таблица I / الجدول I

Disposition / Provision / Disposición / 条款 / Положение / الحكم		Administrations incluses dans le processus de coordination.	Administration included in the coordination process	Administraciones incluidas en el procedimiento de coordinación
		协调过程中包括的主管部门	Администрации, включенные в процесс координации	الإدارات التي تشملها عملية التنسيق
X	9.41 / 9.7	EGY, G, KOR		
	9.41 / 9.7A			
	9.41 / 9.7B			

CR/E Publication

<u>OBSERVATIONS DU BUREAU DES RADIOCOMMUNICATIONS</u>	<u>RADIOCOMMUNICATION BUREAU COMMENTS</u>	<u>OBSERVACIONES DE LA OFICINA DE RADIOCOMUNICACIONES</u>
---	---	---

Relatives aux dispositions

- La disposition 9.7 s'applique à toutes les assignations de fréquence.

Relating to provisions

- Provision 9.7 applies to all frequency assignments.

Relativas a las disposiciones

- La disposición 9.7 se aplica a todas las asignaciones de frecuencia.

La/les administration(s) suivante(s) a/ont soumis une demande en vue de son/leur inclusion dans le processus de coordination au titre du numéro **9.41**.

The following administration(s) submitted request for inclusion in the coordination request under No.**9.41**.

Las siguientes administraciones presentaron solicitud de inclusión en la petición de coordinación con arreglo al número **9.41**.

EGY, G, KOR

Les observations de la/des administration(s) suivante(s) ne sont pas valables pour le/les réseau(x) indiqué(s) ci-après étant donné que n'y figuraient pas les calculs de $\Delta T/T$.

The comments from the following Administration(s) are not valid for the network(s) indicated below since it did not include $\Delta T/T$ calculations.

Los comentarios de las siguientes administraciones no son válidos para las redes indicadas a continuación porque no incluyen los cálculos de $\Delta T/T$.

Les observations de la/des administration(s) suivante(s) concernant le/les réseau(x) indiqué(s) ci-après ne sont pas valables étant donné que ce/ces réseau(x) n'existe(nt) plus ou que $\Delta T/T$ est inférieur à 6% ou bien encore que la/les administration(s) est/sont déjà identifiée(s) pour les groupes pertinents:

The comments from the following administration(s) are not valid for the network(s) indicated below since this/these network(s) no longer exist(s) or $\Delta T/T < 6\%$ or ~~administration(s) is/are already identified for relevant groups.~~

Los comentarios de las siguientes administraciones no son válidos para las redes indicadas a continuación ya que esas redes ya no existen o $\Delta T/T < 6\%$ o ya se han identificado las administraciones para los grupos pertinentes:



EGY : NAVISAT-11A, NAVISAT-12A, NAVISAT-14A, NAVISAT-2A, NAVISAT-7A, NAVISAT-9A

CR/E Publication

I. Nécessité d'une coordination au niveau du groupe

一、需要在组的层次进行的协调

I. Coordination requirements at group level

И. Потребности в координации на уровне группы

I. Requisitos de coordinación a nivel de grupo

إ. متطلبات التنسيق على مستوى المجموعة

Administrations identifiées au titre du N° 9.41/9.7 par : 根据第9.41/9.7款识别的主管部门:				Administrations identified under No. 9.41/9.7 by : Администрации, идентифицированные согласно п. 9.41/9.7:				Administraciones identificadas según N.º 9.41/9.7 por : الإدارات الح دة وفقاً للرقم 7.9/41.9 بموجب:			
B1a Beam designation	B2 Emi-Rcp	BR7a Group id.	GHz	Delta T/T Delta T/T	:	Delta T/T Дельта T/T	:	Delta T/T T/T دلنا	:		
C1R	R	111693774	5	KOR							
		111693775	5	KOR							
		111693776	5	KOR							
		111693777	5	KOR							
		111693778	5	KOR							
		111693779	5	KOR							
		111693780	5	KOR							
C3R	R	111693781	5	KOR							
		111693782	5	KOR							
		111693783	5	KOR							
		111693784	5	KOR							
		111693785	5	KOR							
		111693786	5	KOR							
		111693787	5	KOR							
C5R	R	111693788	5								
		111693789	5								
		111693790	5								
		111693791	5								
		111693792	5								
		111693793	5								
		111693794	5								
E1R	R	111693795	5								
		111693796	42	G							
		111693797	42	G							
		111693798	42	G							
		111693799	42	G							
		111693800	42	G							
		111693801	42	G							
KA1R	R	111693802	42	G							
		111693803	27	KOR							
		111693804	27	KOR							
		111693805	27	KOR							
		111693806	27	KOR							
		111693807	27	KOR							
		111693808	27	KOR							
		111693809	27	KOR							
		111693810	27	KOR							
		111693811	27	KOR							
		111693812	27	KOR							

CR/E Publication

II. Liste des réseaux à satellite

二、卫星网络清单

II. List of satellite networks

II. Список спутниковых сетей

II. Lista de redes de satélite

II. قائمة بالشبكات الساتلية

Liste des réseaux à satellite pour lesquels Delta T/T est supérieur à 6% mais qui ne sont PAS dans l'arc de coordination (au titre du N° 9.7)

List of satellite networks for which Delta T/T > 6% but are NOT within the coordination arc (under No. 9.7)

Lista de redes de satélites para las cuales $\Delta T/T > 6\%$ pero NO se encuentran dentro del arco de coordinación (según N.º 9.7)

Delta T/T > 6%但并不属于协调弧范围的卫星网络清单 (依据 9.7)

Перечень спутниковых сетей, для которых Delta T/T > 6%, однако НЕ находится в пределах координационной дуги (согласно № 9.7)

قائمة الشبكات الساتلية التي تكون فيها النسبة $\Delta T/T < 6\%$ ولكنها ليست ضمن قوس التنسيق (موجب الرقم 7.9)

A1f1 Notifying adm.	A1f3 Inter. sat. org.	A1a Sat. Network	A4a1 Orbital long.	BR3b Category of notif.	BR25 A/T	BR6a Id. no.	BR26 Causing interference	BR27 Receiving interference
EGY		NILESAT-301-7W	7 W	C	A	109520031		R
G		UKSAT-21	67 E	C	A	111520037	C	
KOR		HANSAT-113E	113 E	C	A	111520370	C	R
		HANSAT-116E	116 E	C	A	111520371	C	R
		HANSAT-128.2E	128.2 E	C	A	111520372	C	R
		KORBSAT-113E	113 E	C	A	107520230	C	
		KORBSAT-116E	116 E	C	A	107520231	C	
		KOREASAT-1	116 E	C	A	92520024	C	R
		KOREASAT-1	116 E	N	A	95500170	C	R
		KOREASAT-2	113 E	C	A	92520025	C	R
		KOREASAT-2	113 E	N	A	95500171	C	R

Questions



Supplementary Information

Criteria of Applicability of No. 9.41 (Table 5-1 of Appendix 5 of RR)

AP5-4

TABLE 5-1 (Rev. WRC-12)
Technical conditions for coordination
(see Article 9)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO	A station in a satellite network using the geostationary-satellite orbit (GSO), in any space radiocommunication service, in a frequency band and in a Region where this service is not subject to a Plan, in respect of any other satellite network using that orbit, in any space radiocommunication service in a frequency band and in a Region where this service is not subject to a Plan, with the exception of the coordination between earth stations operating in the opposite direction of transmission	1) 3 400-4 200 MHz 5 725-5 850 MHz (Region 1) and 5 850-6 725 MHz 7 025-7 075 MHz 2) 10.95-11.2 GHz 11.45-11.7 GHz 11.7-12.2 GHz (Region 2) 12.2-12.5 GHz (Region 3) 12.5-12.75 GHz (Regions 1 and 3) 12.7-12.75 GHz (Region 2) and 13.75-14.5 GHz	i) Bandwidth overlap, and ii) any network in the fixed-satellite service (FSS) and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS i) Bandwidth overlap, and ii) any network in the FSS or broadcasting-satellite service (BSS), not subject to a Plan, and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 7^\circ$ of the nominal orbital position of a proposed network in the FSS or BSS, not subject to a Plan		With respect to the space services listed in the threshold/condition column in the bands 1), 2), 3), 4), 5), 6), 7) and 8), an administration may request, pursuant to No. 9.41, to be included in requests for coordination, indicating the networks for which the value of $\Delta T/T$ calculated by the method in § 2.2.1.2 and 3.2 of Appendix 8 exceeds 6%. When the Bureau, on request by an affected administration, studies this information pursuant to No. 9.42, the calculation method given in § 2.2.1.2 and 3.2 of Appendix 8 shall be used

$\pm 8^\circ$ of the nominal orbital position
of a proposed network in the FSS

Coordination Arc under No. 9.7

FREQUENCY BANDS

3 400-4 200 MHz
5 725-5 850 MHz (Region 1)
5 850-6 725 MHz
7 025-7 075 MHz

10.95-11.2 GHz
11.45-11.7 GHz
11.7-12.2 GHz (Region 2)
12.2-12.5 GHz (Region 3)
12.5-12.75 GHz (Regions 1 and 3)
12.7-12.75 GHz (Region 2)
13.75-14.5 GHz

18.0 – 18.3 GHz (Region 2)
18.1 – 18.4 GHz (Regions 1 and 3)

21.4-22 GHz

Other bands above 17.3 GHz

APPLICABLE COORDINATION ARC

Any **FSS / associated Space Operation** within **+/- 10°** of nominal orbital position of a proposed network in **FSS**

Any **FSS or BSS / associates Space Operation** within **+/- 9°** of nominal orbital position of a proposed **FSS or BSS** network

Any **FSS or MetSat / associated Space Operation** within **+/- 8°** of nominal orbital position of a proposed **FSS or MetSat** network

Any **BSS / associated Space Operation** within **+/- 16°** of nominal orbital position of a proposed **BSS** network

Any **FSS / associated Space Operation** within **+/- 8°** of nominal orbital position of a proposed **FSS** network
Any **BSS / associated Space Operation** within **+/- 16°** of nominal orbital position of a proposed **BSS** network
Any **BSS / associated Space Operation** within **+/- 16°** of nominal orbital position of a proposed **FSS** network & vice-versa

Criteria under No. 9.41

FREQUENCY BANDS

3 400-4 200 MHz
5 725-5 850 MHz (Region 1)
5 850-6 725 MHz
7 025-7 075 MHz

10.95-11.2 GHz
11.45-11.7 GHz
11.7-12.2 GHz (Region 2)
12.2-12.5 GHz (Region 3)
12.5-12.75 GHz (Regions 1 and 3)
12.7-12.75 GHz (Region 2)
13.75-14.5 GHz

18.0 – 18.3 GHz (Region 2)
18.1 – 18.4 GHz (Regions 1 and 3)

21.4-22 GHz

Above 17.3 GHz

$\Delta T/T > 6\%$ between:

Any FSS / associated Space Operation and proposed network in FSS

Any FSS or BSS / associated Space Operation and proposed FSS or BSS network

Any FSS or MetSat / associated Space Operation and proposed FSS or MetSat network

Not applicable !!!

Any FSS / associated Space Operation and proposed FSS network

Any BSS / associated Space Operation and proposed BSS network

Any BSS / associated Space Operation and proposed FSS network & vice-versa

Quick points for verifying whether assignments are subject to No. 9.41

- Fall in the bands where coordination arc applies, except 21.4-22 GHz
- Both assignments (proposed one and existing one) are subject to coordination arc (belong to FSS or BSS or MetSat in 18 GHz)
- Both assignments are co-directional (not in opposite direction of transmission)

Checking with CR/C

I. Nécessité d'une coordination au niveau du groupe

一、需要在组的层次进行的协调

I. Coordination requirements at group level

И. Потребности в координации на уровне группы

I. Requisitos de coordinación a nivel de grupo

إ. متطلبات التنسيق على مستوى المجموعة

Administrations identifiées au titre du N° 9.7 par : 根据第9.7款识别的主管部门:				Administrations identified under No. 9.7 by : Администрации, идентифицированные согласно п. 9.7:				Administraciones identificadas según N.º 9.7 por : الإدارات المحددة وفقاً للرقم 7.9 بموجب:			
B1a Beam designation	B2 Emi-Rcp	BR7a Group id.	GHz	Delta T/T Delta T/T	Delta T/T Дельта Т/Т	Delta T/T T/T دلتا	Arc de coordination 协调弧	Coordination Arc Дуга координации	Arco de coordinación قوس التنسيق		
CUR	R	111719663	5				ARS/ARB	ARS	AZE	CHN	CTI/RAS
							CYP	D	EGY	F	G
							GRC	HOL	IND	ISR	LUX
		111719664	5				MLA	NIG	PAK	PNG	RUS/IK
							RUS	THA	TUR	UAE	USA
		111719665	5				ARS/ARB	ARS	AZE	CHN	CTI/RAS
							CYP	D	EGY	F	G
							GRC	HOL	IND	ISR	LUX
KAU1R	R	111719692	27	CTI/RAS	F	I	USA				
							ARS/ARB	ARS	AZE	CHN	CTI/RAS
							CYP	D	EGY	F/EUT	F
		111719693	27	CTI/RAS	F	I	USA				
							G	GRC	HOL	I	ISR
							KAZ	LUX	MLA	NOR	PAK
		111719694	27	CTI/RAS	F	I	USA				
							PNG	QAT	RUS	TUR	UAE
							UKR				
		111719695	27	ARS	AUS	CHN	CTI/RAS	CYP	D	EGY	F
				G	GRC	I	J	LUX	GRC	HOL	ISR
				QAT	RUS	UAE	USA		LUX	MLA	PAK
KAU2R	R	111719695	27	ARS	AUS	CHN	CTI/RAS	CYP	D	EGY	F
				G	GRC	I	J	LUX	GRC	HOL	ISR
				QAT	RUS	UAE	USA		LUX	MLA	PAK

Indicates that:

1. Proposed assignment is subject to CA
2. Affected assignments are subject to CA

Indicates that affected assignments are NOT subject to CA