



# World Radiocommunication Seminar 2016

## WORKSHOP FSS Plan - Appendix 30B

### Analyzing Examination Results GIBC/AP30B/6.5 Annex 4

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International Telecommunication Union

**For the potentially affected Administrations  
to evaluate levels of interference to their FSS Plan allotment or  
existing additional systems and comment/coordinate**



**For the Notifying Administration  
to prepare the coordination process  
to finalize characteristics for entry into the AP30B List**



# When?



AP30B/6.5 Annex 4  
Single Entry/Aggregate  
C/I compatibility  
*(Reference Situation)*



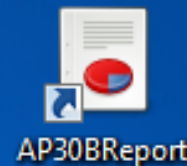
BR Technical  
Examination of the  
NEW Satellite  
Network

BR Publication of  
AP30B/A6A/  
Special Section



Distribution of RESULTS  
database file  
11x5590xx\_SAT-NAME\_RESULTS.mdb

Commenting and  
coordination process  
between Administrations



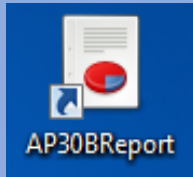
Administrations  
View and Analyze  
Results



# Within AP30B Technical Examinations



AP30B Provisions	Criteria	Software	Publications
§6.3 a)	“Other provisions”	GIBC/PFD	<b>AP30B/A6A/ Special Section (§6.7 of AP30B)</b>
§6.3 b)	Annex 3 of AP30B	<b>GIBC/Appendix 30B</b>	
<b>§6.5 a)b)c)</b>	<b>Annex 4 of AP30B</b>		
§6.6	(service area)		



**Analysis of interference to comment and coordination process**

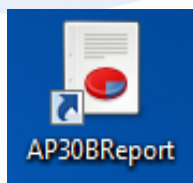
## Submission of final characteristics

§6.19 a)	(service area)	GIBC/Appendix 30B	<b>AP30B/A6B/ Special Section (§6.23 or §6.25 of AP30B) LIST</b>
§6.19 b)	“Other provisions”	GIBC/PFD	
§6.19 c)	Annex 3 of AP30B	<b>GIBC/Appendix 30B</b>	
§6.21	<b>Annex 4 of AP30B</b>		
§6.22			



# Exercise

## Analyzing results GIBC/AP30B/6.5 Annex 4





# Special Section annexed to BR IFIC Cover Page in F/E/S



UNION INTERNATIONALE DES TELECOMMUNICATIONS  
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION  
RADIOCOMMUNICATION BUREAU

UNION INTERNACIONAL DE TELECOMUNICACIONES  
OFICINA DE RADIOCOMUNICACIONES

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RÉSEAU À SATELLITE SATELLITE NETWORK RED DE SATELITE		<b>V8_AP30B</b>		SECTION SPÉCIALE N° SPECIAL SECTION No. SECCIÓN ESPECIAL N.º	<b>AP30B/A6A/999</b>
ADM RESPONSABLE RESPONSIBLE ADM ADM RESPONSABLE	<b>SUI</b>	LONGITUDE NOMINALE NOMINAL LONGITUDE LONGITUD NOMINAL	<b>65 E</b>	BR IFIC / DATE BR IFIC / DATE BR IFIC/FECHA	<b>2899 / 01.01.2017</b>
NOTIFIÉ AU NOM DE NOTIFIED ON BEHALF OF NOTIFICADA EN NOMBRE DE				NUMÉRO D'IDENTIFICATION IDENTIFICATION NUMBER NUMERO DE IDENTIFICACION	<b>116559900</b>
RENSEIGNEMENTS REÇUS PAR LE BUREAU LE / INFORMATION RECEIVED BY THE BUREAU ON / INFORMACION RECIBIDA POR LA OFICINA EL					<b>17.11.2016</b>

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

DATE LIMITE POUR LA RECEPTION DES COMMENTAIRES:  
EXPIRY DATE FOR THE RECEIPT OF COMMENTS:  
FECHA LIMITE PARA LA RECEPCION DE LOS COMENTARIOS:

**01.05.2017**



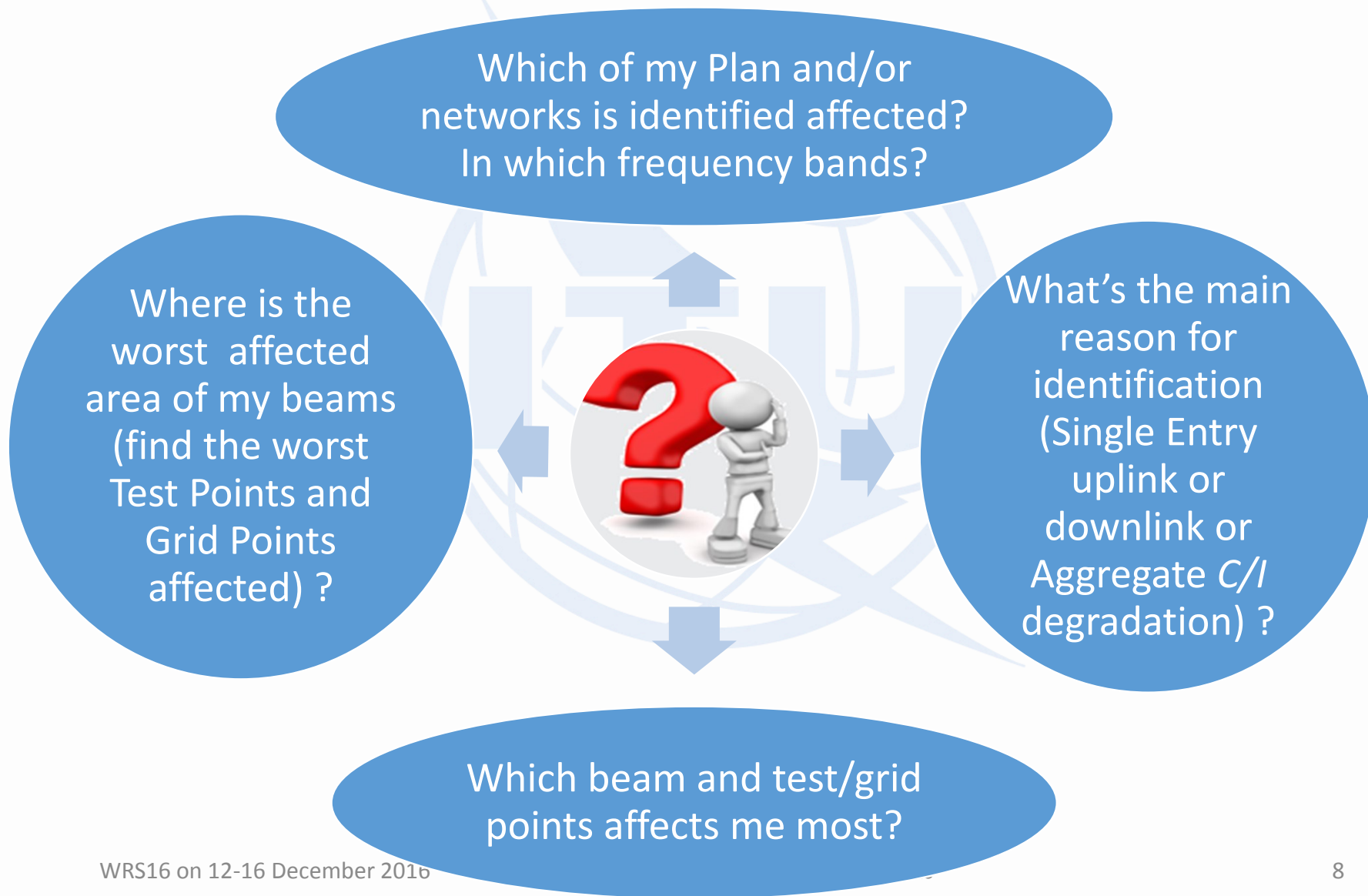
# Special Section annexed to BR IFIC AP30B/6.5 - Annex 4 Results Table



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 / أو الشبكات الساتلية المتأثرة بالإدارات و

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
<b>App.30B, Art.6, § 6.5 - Annexe 4</b> <b>App.30B, Art.6, § 6.5 - Annex 4</b> <b>Ap.30B, Art.6, § 6.5 - Anexo 4</b> <b>附录30B, 第6条, 第6.5段- 附件4</b> <b>Пр. 30B, Ст. 6, п. 6.5 – Дополнение 4</b> <b>التذييل 30B، المادة 6، الفقرة 5.6 الملحق 4</b>							
§2.1 (6/4 GHz)	BLR		Pending	BTS-1-30B	110559004	64.4 E	6.927
	ISR		Pending	AMS-30B-C-65E	110559021	65 E	44.424
§2.1 (13/10-11 GHz)	BLR		Pending	BTS-1-30B	110559004	64.4 E	3.487
	ISR		Pending	AMS-30B-65E	109559008	65 E	45.124
	PNG		Pending	NEW DAWN FSS-4	112559041	64 E	12.611
§2.2 (6/4 GHz)	BLR		Pending	BTS-1-30B	110559004	64.4 E	48.544
	EGY		Allotment	EGY000000	90558073	67.11 E	29.870
	ISR		Pending	AMS-30B-C-65E	110559021	65 E	49.889
§2.2 (13/10-11 GHz)	BLR		Pending	BTS-1-30B	110559004	64.4 E	30.235
	EGY		Allotment	EGY000000	90558073	67.11 E	13.040
	ISR		Pending	AMS-30B-65E	109559008	65 E	33.662
	PNG		Pending	NEW DAWN FSS-4	112559041	64 E	11.717
§2.3 (6/4 GHz)	BLR		Pending	BTS-1-30B	110559004	64.4 E	42.894
	EGY		Allotment	EGY000000	90558073	67.11 E	24.220
	ISR		Pending	AMS-30B-C-65E	110559021	65 E	45.177
§2.3 (13/10-11 GHz)	BLR		Pending	BTS-1-30B	110559004	64.4 E	24.589
	EGY		Allotment	EGY000000	90558073	67.11 E	7.395
	ISR		Pending	AMS-30B-65E	109559008	65 E	45.179
	PNG		Pending	NEW DAWN FSS-4	112559041	64 E	11.156

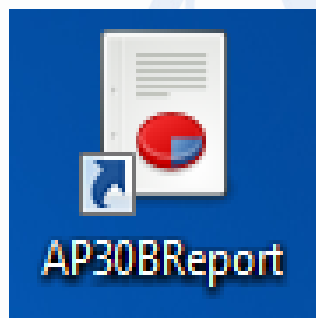
# Analysis results of AP30B/6.5 Annex 4 for Administrations identified affected







# Analysis with AP30BReport software





# GIBC/AP30B Results database in BR IFIC DVD



## ➤ Results File name for the exercise:

**116559900\_V8\_AP30B\_RESULTS.mdb**

## ➤ GIBC/AP30B/Anx4 Results Table:

ap30b\_clc\_res

## ➤ Relevant Fields per test/grid points:

c2i, c2i\_limit, c2i\_ref, c2i\_delta, f\_affected,  
f\_belowlimit...

## ➤ Path in BR IFIC DVD of published files:

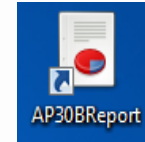
\\Databases\\AP30B\\RESULTS\\ .zip



# Exercise with AP30BReport



## ➤ Open AP30BReport software from SAM



The screenshot shows the AP30BReport software interface. The window title is "AP30BReport". The menu bar includes "File", "Edit", "Query", and "Help". The "Output database path:" field contains ".116559900\_V8\_AP30B\_RESULTS.MDB". A "Reload selected database" button is highlighted with a red box. The "Main" tab is selected, showing "Annex 4 - C/I". The "Analysis Parameters" section includes: "Input database path: C:\AP30B\_v8\_st24.mdb", "Analysis started on: 30/11/2016 4:09 PM", "Analysis ended on: 30/11/2016 4:10 PM", "Analysis was run by: glaude", "Software version: 3.6.1.1", "In production?: ", "Analysis succeeded?: ", "Detailed report?: ", and "Grid generated?: ". The "A&A database path:" field is empty. The "Report Type" dropdown menu is open, showing "Affected networks summary" selected. Four numbered instructions are overlaid on the interface: 1. Connect to the exercise file 116559900\_V8\_AP30B\_RESULTS.mdb (pointing to the file icon in the top right); 2. Click to upload results data (pointing to the "Reload selected database" button); 3. Select tab : Annex 4 - C/I (pointing to the "Annex 4 - C/I" tab); 4. Select Report Type: Affected network summary (pointing to the "Affected networks summary" option in the dropdown menu).



# Which of my Plan and/or networks is identified affected? In which frequency bands?



## Option: Affected Networks Summary

To do:

1/ you are BLR and wish to check if your Plan in 13/10-11GHz bands is affected

AP30BReport

File Edit Query Help

Output database path: .116559900\_V8\_AP30B\_RESULTS.MDB

Reload selected database

Main Annex 4 - C/I

Analysis Parameters

Input database path: C:\AP30B\_v8\_st24.mdb

Analysis started on: 30/11/2016 4:09 PM

Analysis ended on: 30/11/2016 4:10 PM

Analysis was run by: glaude

Software version: 3.6.1.1

In production?:

Analysis succeeded?

Detailed report?

Grid generated?

A&A database path:

Affected networks summary

Technical examination summary

C/I values at test and/or grid points

Reference situation

Run Query Found 19 results in 147 ms

Orbital Position	Admin.	Ntwk. Org.	Notice ID	Satellite Name	Network Status	C/I Degradation	Annex 4 Subsection	Frequency Band
64.4	BLR		110559004	BTS-1-30B	Pending	24.589	2.3	13/10-11
64.4	BLR		110559004	BTS-1-30B	Pending	30.235	2.2	13/10-11
64.4	BLR		110559004	BTS-1-30B	Pending	3.487	2.1	13/10-11
64.4	BLR		110559004	BTS-1-30B	Pending	42.894	2.3	6/4
64.4	BLR		110559004	BTS-1-30B	Pending	48.544	2.2	6/4
64.4	BLR		110559004	BTS-1-30B	Pending	6.927	2.1	6/4
67.11	EGY		90558073	EGY00000	Allotment	7.395	2.3	13/10-11
67.11	EGY		90558073	EGY00000	Allotment	13.04	2.2	13/10-11
67.11	EGY		90558073	EGY00000	Allotment	24.22	2.3	6/4
67.11	EGY		90558073	EGY00000	Allotment	29.87	2.2	6/4
65	ISR		109559008	AMS-30B-65E	Pending	45.179	2.3	13/10-11
65	ISR		109559008	AMS-30B-65E	Pending	33.662	2.2	13/10-11
65	ISR		109559008	AMS-30B-65E	Pending	45.124	2.1	13/10-11
65	ISR		110559021	AMS-30B-C-65E	Pending	45.177	2.3	6/4
65	ISR		110559021	AMS-30B-C-65E	Pending	49.889	2.2	13/4

See details with filter/sort by options of data published in the AP30B/A6A/



# What's the main reason for identification (Single Entry Uplink or Downlink or Aggregate C/I degradation) ?



## Option: Technical Examination Summary

To do: you are BLR and wish to check the detailed degradations in 13/10-11GHz bands of your BTS-1-30B network

The screenshot shows the AP30BReport application window. The 'Affected networks summary' section is expanded to show 'Technical examination summary'. A 'Run Query' button is visible, and a table of results is displayed below. Callouts point to the 'Technical examination summary' menu item, the 'Run Query' button, and the table.

Orbital Position	Admin.	Ntwk. Org.	Notice ID	Satellite Name	Network Status	Frequency Band	SE Down TP Degradation	SE Down GP Degradation	SE Up Degradation	AG Degradation
64.4	BLR		110559004	BTS-1-30B	Pending	13/10-11	30.235	30.047	3.487	24.589
64.4	BLR		110559004	BTS-1-30B	Pending	6/4	48.544	48.402	6.927	42.894
67.11	EGY		90558073	EGY00000	Allotment	13/10-11	13.04	12.975		7.395
67.11	EGY		90558073	EGY00000	Allotment	6/4	29.87	29.748		24.22
65	ISR		109559008	AMS-30B-65E	Pending	13/10-11	33.662	33.596	45.124	45.179
65	ISR		110559021	AMS-30B-C-65E	Pending	6/4	49.889	49.467	44.424	45.177
64	PNG		112559041	NEW DAWN FSS-4	Pending	13/10-11	11.705	11.717	12.611	11.156



# What would be the reference situation if I accept interference from the new network?



## Option: Reference Situation

### To do:

you are BRL and wish to keep an operational C/I Reference Situation in 13/10-11GHz bands of your BTS-1-30B network. Do you accept the new network?

**Select Reference situation**

**Filter Value (optional)**

**Run Query of Results**

**See details Worst New C/I Ref < 0dB**

Admin.	Notice ID	Satellite Name	Orbital Position	Frequency Band	Grp. Id. Aff. Up	Grp. Id. Aff. Dn	Point Longitude	Point Latitude	New C/I Reference	C/I Reference	Annex 4 Subsection
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	23.2	52.26	-3.028	51.785	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	23.52	53.95	-1.631	53.13	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	23.61	51.53	-3.589	51.337	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	25.8	54.86	-1.106	53.838	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	26.64	55.69	-1.637	53.629	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	28.13	56.16	-2.577	53.082	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	30.27	55.87	-3.546	52.426	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	30.55	51.27	-2.238	52.691	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	31.78	52.11	-2.52	52.75	2.3
BLR	110559004	BTS-1-30B	64.4	13/11	26	24	32.74	53.41	-3.534	52.255	2.3
EGY	90558073	EGY00000	67.11	13/11	27	28	34.2	31.33	14.233	999.99	2.3
EGY	90558073	EGY00000	67.11	13/11	27	28	34.8	29.5	14.919	999.99	2.3
EGY	90558073	EGY00000	67.11	13/11	27	28	36	23.17	13.605	999.99	2.3
EGY	90558073	EGY00000	67.11	13/11	27	28	34	21.67	14.367	999.99	2.3
EGY	90558073	EGY00000	67.11	13/11	27	28	25	22	13.938	999.99	2.3
EGY	90558073	EGY00000	67.11	13/11	27	28	25.4	32	13.855	999.99	2.3
ISR	109559008	AMS-30B-65E	65	13/11	7	10	0	30	-7.728	35.9	2.3
ISR	109559008	AMS-30B-65E	65	13/11	7	10	10	20	-7.687	36.474	2.3
ISR	109559008	AMS-30B-65E	65	13/11	7	10	10.5	52	-7.688	35.815	2.3
ISR	109559008	AMS-30B-65E	65	13/11	7	10	20.5	44.4	-7.653	36.459	2.3
ISR	109559008	AMS-30B-65E	65	13/11	7	10	23	-3	-7.927	37.71	2.3



# Which beam affects me most?



## Option: C/I values at test and/or grid points

To do: you are BLR and wish to identify the beam creating worst degradation in the 6 GHz Up link band on your BTS-1-30B network

AP30BReport

File Edit Query Help

Output database path: C:\NR\_TEX\_RESULTS\116559900\AP30B

Reload selected database

Main Annex 4 - C/I

Affected networks summary  
 Technical examination summary  
**C/I values at test and/or grid points**  
 Reference situation

Select C/I values at test and/or grid points

Filter Value (optional)

Filter Field	Filter Value	Available
Admin :		
Notice ID :		
Frequency Band :	6/4	
Annex 4 Subsection :		
Grp. Id. Aff. Up. :		
Grp. Id. Aff. Dn. :		
Grp. Id. Inf. Up. :		
Grp. Id. Inf. Dn. :		
Inf. Notice ID :		

Run Query of Results

Run Query Found 4782 results in 546 ms

See details of test points affected for BLR in 6 GHz band (up link)

Get the maximum degradation value

Get the corresponding Grp. Id. Inf. Up

Search with SpaceCap or SpaceQry or in the AP30B\_v8\_st24.mdb table grp the corresponding beam name of V8\_AP30B network

Result is "RC"

Admin	Notice ID	Satellite Name	Orbital Position	Frequency Band	Grp. Id. Aff. Up	Grp. Id. Aff. Dn	Grp. Id. Inf. Up	Grp. Id. Inf. Dn	Inf. Notice ID	Inf. Sat. Name	Station Type	Point Longitude	Point Latitude	C/I	C/I Reference	C/I Degradation	Annex 4 Subsectio
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	23.2	52.26	23.348	30	6.652	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	23.52	53.95	24.104	30	5.896	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	23.61	51.53	23.075	30	6.925	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	25.8	54.86	24.394	30	5.606	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	26.64	56.69	24.075	30	5.925	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	28.13	56.16	23.567	30	6.433	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	30.27	56.87	23.073	30	6.927	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	30.55	51.27	24.283	30	5.717	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	31.78	52.11	24.058	30	5.942	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	32.74	53.41	23.382	30	6.618	2.1
ISR	110559021	AMS-30B-C-65E	65	6/4	13	0	3	0	116559900	V8_AP30B	P	0	30	-7.807	30	37.807	2.1





# Where is the worst affected area of my beams (find the worst Test Points and Grid Points affected) ? Is it a region I need to protect?



## Option: C/I values at test and/or grid points

To do: you are BLR and wish to identify the most affected test point in the 6 GHz Up link band of your BTS-1-30B network

**Select C/I values at test and/or grid points**

**Filter Value (optional)**

**Run Query of Results**

Found 4782 results in 546 ms

See details of test points affected for BLR in 6 GHz band (up link)

Get the maximum degradation value  
Get the corresponding "Point Latitude / Longitude"  
Get the corresponding "Grp. Id. Aff. Up"

Search with SpaceCap or SpaceQry or in the AP30B\_v8\_st24.mdb table grp the corresponding beam name of BTS-1-30B network

Open the beam in GIMS and capture the test point coordinates

Admin.	Notice ID	Satellite Name	Orbital Position	Frequency Band	Grp. Id. Aff. Up	Grp. Id. Aff. Dn	Grp. Id. Inf. Up	Grp. Id. Inf. Dn	Inf. Notice Id	Inf. Sat. Name	Station Type	Point Longitude	Point Latitude	C/I	C/I Reference	C/I Degradation	Annex 4 Subsect
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	23.2	52.26	23.348	30	6.652	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	23.52	53.95	24.104	30	5.896	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	23.61	51.53	23.075	30	6.925	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	25.8	54.86	24.394	30	5.606	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	26.64	55.69	24.075	30	5.925	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	28.13	56.16	23.567	30	6.433	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	30.27	55.87	23.073	30	6.927	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	30.55	51.27	24.283	30	5.717	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	31.78	52.11	24.058	30	5.942	2.1
BLR	110559004	BTS-1-30B	64.4	6/4	25	0	3	0	116559900	V8_AP30B	P	32.74	53.41	23.382	30	6.618	2.1
ISR	110559021	AMS-30B-C-65E	65	6/4	13	0	3	0	116559900	V8_AP30B	P	0	30	-7.807	30	37.807	2.1





# TIPS to view many affected test/grid points in GIMS



- **Open a new MS-Excel sheet**
- **Open in GIMS the identified affected beam diagrams**
- **In AP30BReport:**
  - Filter results
  - Copy/paste in the opened MS-excel sheet
  - Select and copy the 2 columns of the affected test points coordinates
- **Paste in GIMS**
- **Analyze the results!**



# Key elements to remember



- **Before commenting when identified under AP30B/6.5 Annex 4 a further analysis of Single Entry / Aggregate C/I degradations is required**
- **With AP30BReport and GIMS software connected to the RESULTS database published in the BR IFIC DVD, further analyze can be performed at beams and test/grid points levels with information about corresponding Single Entry/Aggregate C/I reference situation degradations values**
- **Test/grid points identified affected by AP30B/6.5 Annex 4 examination may not be affected by advanced characteristics of the affected network. Comments and coordination can be done based on future use requirements of the networks**
- **For reminder, AP30B/6.6 identifications is in regards of agreements of operation on a territory in a Service Area and not subject to commenting period and assistance**




**Thank you**

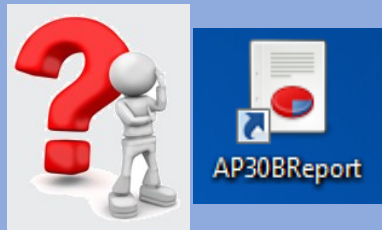
**[veronique.glaude@itu.int](mailto:veronique.glaude@itu.int)**




# Annex: AP30B Technical Examinations

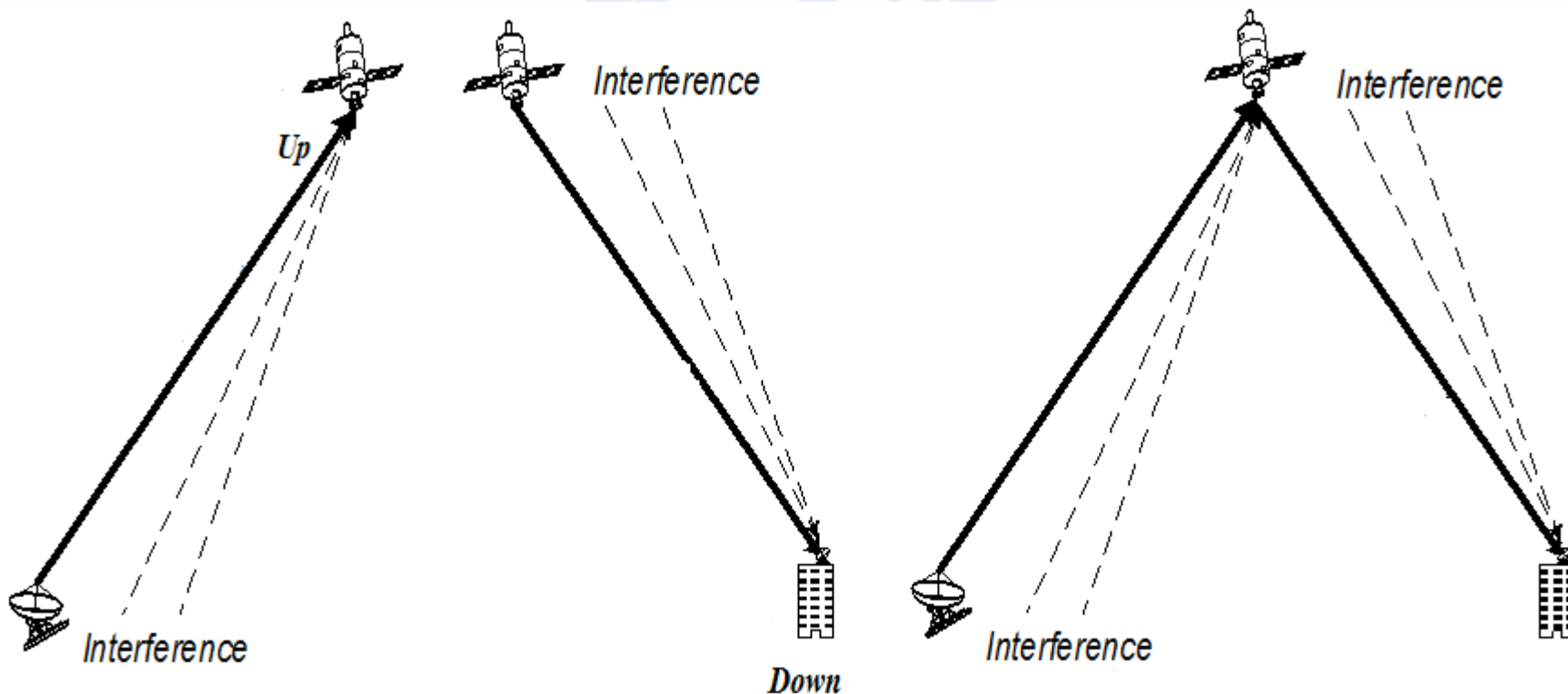


AP30B Provisions	Criteria	Software	Publications
§6.3 a)	<b>“Other provisions”</b>	GIBC/PFD	 AP30B/A6A/ Special Section (§6.7 of AP30B)
§6.3 b)	<b>Annex 3 of AP30B</b>	GIBC/Appendix 30B	
§6.5 a)b)c)	<b>Annex 4 of AP30B</b>		
§6.6	<b>(service area)</b>		



**Analysis of interference and coordination process**  
**Submission of final characteristics**

§6.19 a)	<b>(service area)</b>	GIBC/Appendix 30B	 AP30B/A6B/ Special Section (§6.23 or §6.25 of AP30B) LIST
§6.19 b)	<b>“Other provisions”</b>	GIBC/PFD	
§6.19 c)	<b>Annex 3 of AP30B</b>	GIBC/Appendix 30B	
§6.21	<b>Annex 4 of AP30B</b>		
§6.22			





# Annex: AP30B/6.5 Annex 4

## Criteria to be considered affected



### Trigger Limits:

- In the coordination arc: 10 degrees in 6/4 GHz bands and 9 degrees in 13/10-11 GHz bands
- Agreement is required when at least one of the following three conditions is not satisfied

#### Uplink single-entry

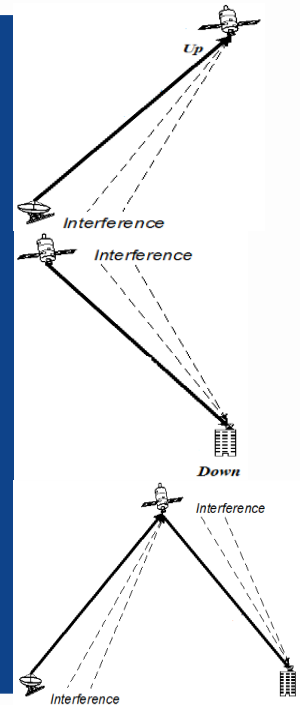
$C/I \geq 30\text{dB}$  or  $(C/N)_{\text{up}} + 9\text{dB}$  or accepted value

#### Downlink single-entry

$C/I \geq 26.65\text{dB}$  or  $(C/N)_{\text{down}} + 11.65\text{dB}$   
or accepted value (test points and **grid points**)

#### Over all aggregate

$C/I \geq 21\text{dB}$  or  $(C/N)_{\text{total}} + 7\text{dB}$  or accepted value



**Notes:** Computation precision is 0.05dB for all. Tolerance is 0.25dB for aggregate C/I criteria of assignments not stemming from conversion (beyond the envelop characteristics of the initial allotment)

# Annex: Grid points for downlink examination (see note 19 of Annex 4 to AP 30B)

Introduced by WRC-07 to properly protect the service area of allotments / assignments from shaped beams whose antenna diagrams contain a number of “holes” towards certain specific downlink test points.

The grid points are **evenly generated inside and on the border of the service areas** of the interfering networks.

The reference value at a grid point **is interpolated** from the reference values on the test points.

$$V_{Eg} = \frac{\sum_{h=1}^{Nt} R_{Th} \times (d_{Th})^{-2}}{\sum_{h=1}^{Nt} (d_{Th})^{-2}}$$

**Note since 01.01.2014 :**

If the value  $(R_{Th} - ((C/N)_{d,Th} - (C/N)_{d,Eg}))$  is lower than  $R_{Th}$ , then  $(R_{Th} - ((C/N)_{d,Th} - (C/N)_{d,Eg}))$  shall be used in the equation instead of  $R_{Th}$ ,

where:  $(C/N)_{d,Th}$ : the downlink C/N value at test point  $Th$ ;

$(C/N)_{d,Eg}$ : the downlink C/N value at grid point  $Eg$ .

