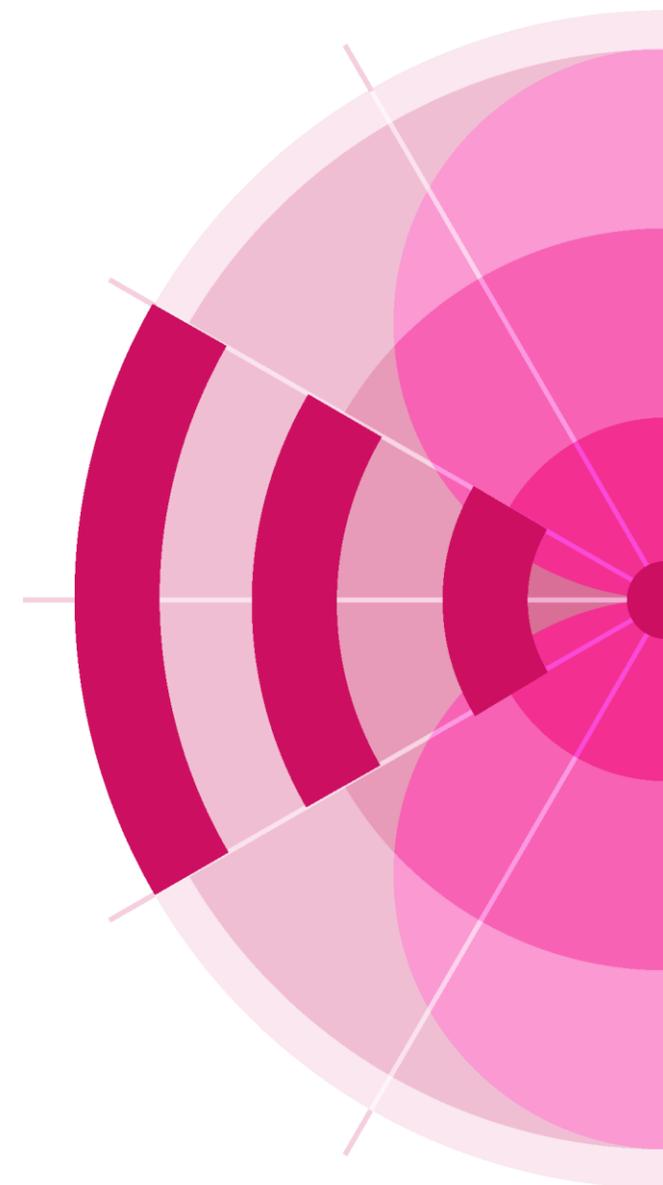


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GIBC Appendix 8 Exercise

Coordination between GSO Networks:
 $\Delta T/T$ examination exercise using
GIBC Appendix 8 software



New Appendix 8 software

What's new?



List of affected networks per group of the incoming



Treatment of primary and secondary status

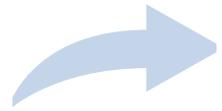


Reporting and Review results tools

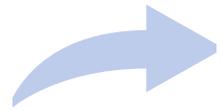


Improved performance

GIBC Appendix 8 Exercise



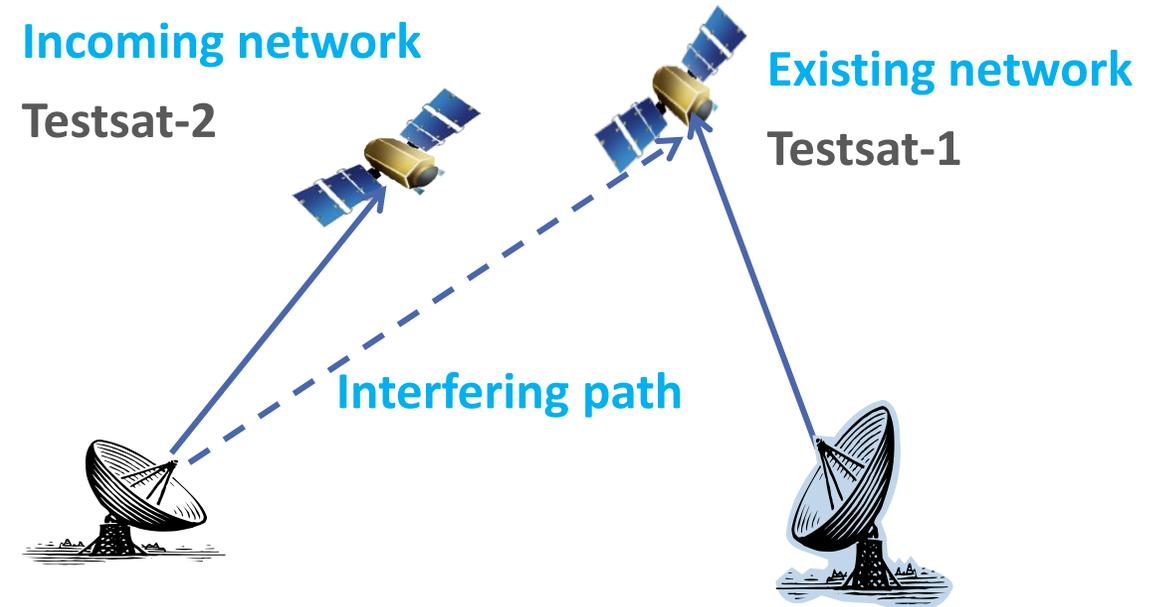
GIBC Appendix 8 to assess the coordination requirements



Appendix 8 case I Uplink, co-directional interference



Separate treatment of up-links and down-links



GIBC Ap8 Exercise - Test case data

Existing network:

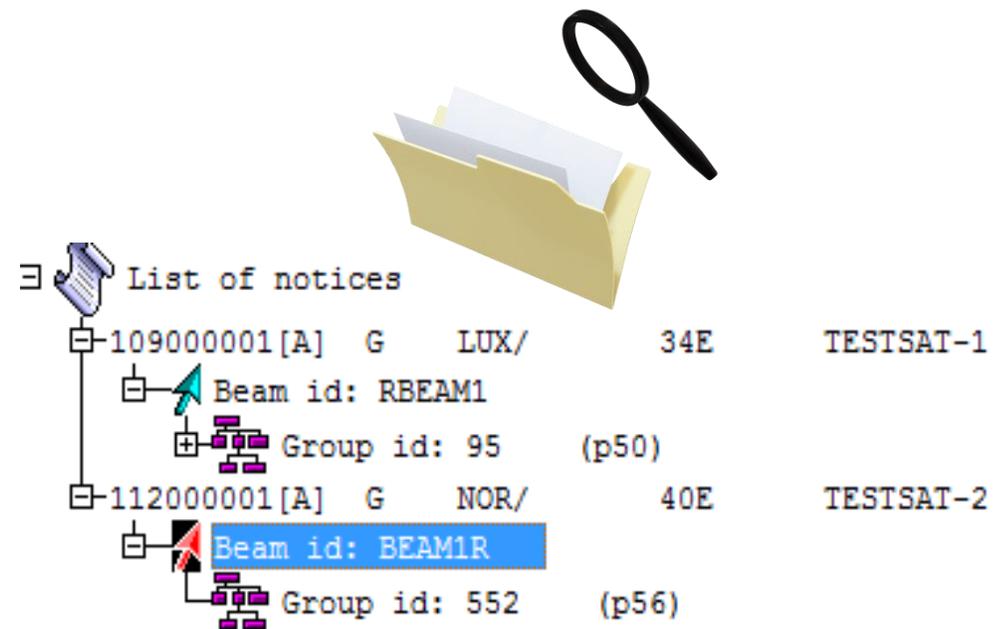
- TESTSAT-1 Id:**109000001** at 34°E
- R/Beam: RBEAM1, Max Gain 42dB, Noise Temperature 550K
- Central frequency: 29.95GHz, BW 72MHz

Incoming network:

- TESTSAT-2 Id:**112000001** at 40°E
- R/Beam: BEAM1R, -49.9dBW/Hz
- Central frequency: 29.96GHz, BW 72MHz

Associated ES:

- Name: **TYPICAL ES1**
- Type: Typical Earth Station
- Radiation pattern: REC-580-6
- Max Gain: 54.5dB



GIBC Appendix 8 Exercise - Files



[Ap8_exercise_wrs20.mdb](#)

SNS formatted database with information about the incoming and existing network



[Ap8_exercise_wrs20_gims.mdb](#)

GIMS graphical data: service areas and gain contours that were captured and stored in the GIMS-format database



[Ap8_exercise_results_wrs20](#)

Directory containing the results of the Appendix 8 examination



-  Ap8_exercise_results_wrs20
-  Ap8_exercise_wrs20.mdb
-  Ap8_exercise_wrs20_gims.mdb



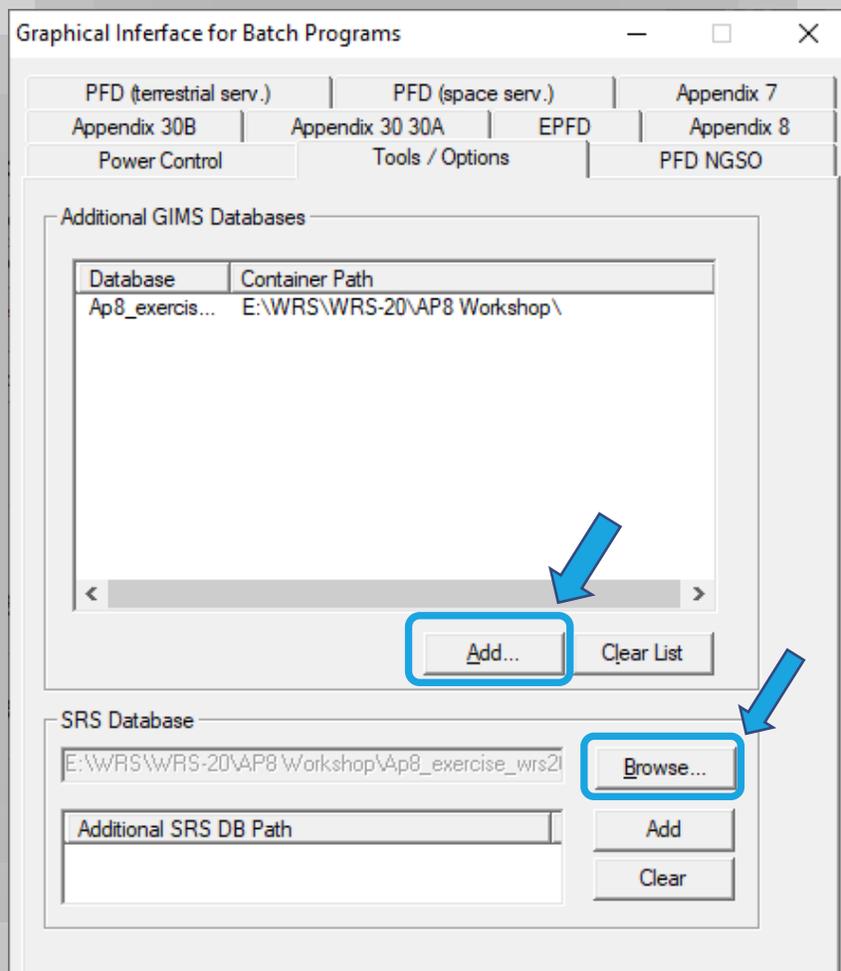
Databases

In the Tools & Options we specify the location of the input databases

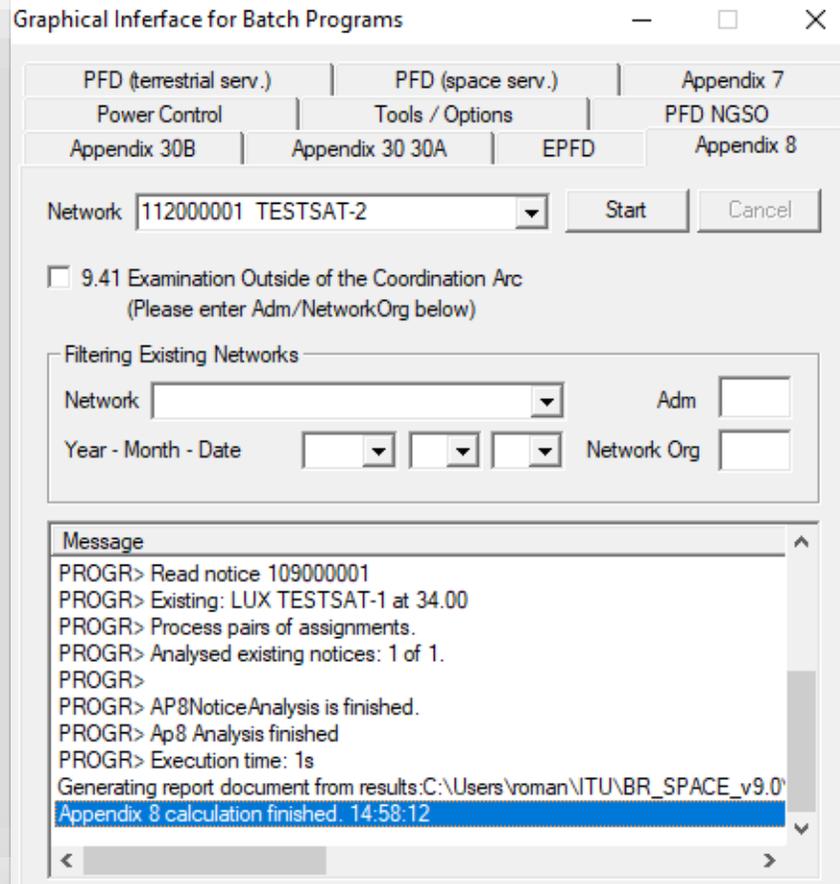
Click Browse and select the file:
[Ap8_exercise_wrs20.mdb](#)

Click Add and select the additional GIMS database file:

[Ap8_exercise_wrs20_gims.mdb](#)



Appendix 8 Examination



Select incoming network: **112000001**

Click **Start**



Results of the Analysis

View Results



Report File



Open Folder



Log File



Database



Results

C:\Users\roman\NTU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201



View Results

Report File

Open Folder

Log File

Database

Appendix 8 Report

Analysis Information

Summary

Affected Networks

Messages

Appendix 8 report for ntc_id:112000001

APPENDIX 8 ANALYSIS FINISHED OK

Started at: 22/10/2020 20:41:47 Finished at: 22/10/2020 20:41:48 Exec time: 0s
 Production: Test vrs Run by: roman
 Version: C:\Program Files (x86)\Itu\BR_Space_v9.0\Gibc\AP8

ANALYSIS DETAILS

Ntc id: 112000001 Exi id: 0 9.41: N
 Existing Adm: none Existing Ntwk: none Date before: none

DATABASE DETAILS

SRS Database: E:\WRS\WRS-20\AP8 Workshop\Ap8_exercise_wrs20.mdb
 SRS Additional:none
 Results db: C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022204146\AP8_RESULTS.MDB

INCOMING NETWORK DETAILS

Admin: NOR Sat name: TESTSAT-2 Longitude nom: 40
 Date of rcv: 23/10/2012 Status: 50 Notif rsn: C
 Action code: A Target ntc id: Plan id:

SUMMARY FOR PROVISION 9.7 T (DELTA T/T METHOD)

LIST OF POTENTIALLY AFFECTED ADMINISTRATIONS: LUX

R BEAM1R 000000552 29GHz LUX

AFFECTED NETWORKS UNDER 9.7-CI T (DELTA T/T METHOD)

LUX 109000001 TESTSAT-1 34.00 R

NO ERROR MESSAGES

Appendix 8 Result: Interactive tool



User friendly



Standalone application



Navigate all the results in a folder



$\Delta T/T$ calculations of a pair of assignments



Export into different formats



Filter, search, Group, sorting...

Ap8Results 1.0.0.0

Administration	Satellite name	Date of receipt	Status	Notification reason	Nominal longitude
USA	USASAT-55Y	1/9/2014	50	C	-76

Incoming Id	Existing Id	Finished Ok	Production	User name	Started at	Finished at	Run time
114520011	0	Y	Y	roman	9/28/2020 9:53:59 AM	9/28/2020 10:01:37 AM	7m38s

Results for each group of the incoming network

Drag a column header here to group by that column

Inc beam...	Inc grp id	Coord prov	Aff ntc id	Satellite name	No...	Adm/Ntwk org
UL1	114620755	9.41	99500228	EUTELSAT 3-12.5W	-12.5	F/EUT
UL1	114620755	9.41	103500132	JCSAT-2R	154	J
UL1	114620755	9.41	103500133	JCSAT-1R	150	J
UL1	114620755	9.41	103500280	EUTELSAT 3-7E	7	F/EUT
UL1	114620755	9.41	103500286	EUTELSAT 3-10E	10	F/EUT
UL1	114620755	9.41	103500287	EUTELSAT 3-13E	13	F/EUT
UL1	114620755	9.41	103500288	EUTELSAT 3-16E	16	F/EUT
UL1	114620755	9.41	103500312	EUTELSAT 3-21.5E	21.5	F/EUT
UL1	114620755	9.41	103500313	EUTELSAT 3-33E	33	F/EUT
UL1	114620755	9.41	103500314	EUTELSAT 3-36E	36	F/EUT
UL1	114620755	9.41	104500485	B-SAT-Q	-61	B
UL1	114620755	9.41	105500530	N-STAR-B2	136	J

Total: 1147

Print | MS Excel | Text | Image | Save Layout | My Layout

Select Result

C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\114520011\AP8_200928095357\AP8_RESULTS.MDB

List of Affected administrations per group of the incoming!!

Easy way to get details of the examination

Ap8Results Tool – What’s for?

Manage all your results databases

Administration	Satellite name	Date of receipt	Status	Notification reason	Nominal longitude
LUX	TESTSAT-1	3/12/2009	50	C	34

Incoming Id	Existing Id	Finished Ok	Production	User name	Started at	Finished at	Run time
109000001	112000001	Y	N	roman	10/19/2020 9:41:21 PM	10/19/2020 9:41:22 PM	0s

C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS

The number of Appendix 8 result files found in the folder is: 30

File Name	Size
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\103591290\AP8_200925163615\AP8_RESULTS.MDB	1152 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\103591295\AP8_200925185057\AP8_RESULTS.MDB	1140 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\109000001\AP8_201019190136\AP8_RESULTS.MDB	1180 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\109000001\AP8_201019214121\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019190214\AP8_RESULTS.MDB	1284 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019190410\AP8_RESULTS.MDB	1156 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019213847\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019213953\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019214004\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019214153\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020090532\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020090611\AP8_RESULTS.MDB	1304 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020091047\AP8_RESULTS.MDB	1140 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020091206\AP8_RESULTS.MDB	1128 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020091347\AP8_RESULTS.MDB	1284 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022110505\AP8_RESULTS.MDB	1284 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022121907\AP8_RESULTS.MDB	1156 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022204146\AP8_RESULTS.MDB	1284 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201023145810\AP8_RESULTS.MDB	1284 KB
C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\114520011\AP8_200928095357\AP8_RESULTS.MDB	2228 KB

C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\109000001\AP8_201019214121\AP8_RESULTS.MDB

View Results



Show every result



Get information for each program run



Generate reports



Go to View Results

- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\109000001\AP8_201019214121\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019190214\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019190410\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019213847\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019213953\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019214004\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201019214153\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020090532\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020090611\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020091047\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020091206\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020091347\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022110505\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022121907\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201022204146\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201023145810\AP8_RESULTS.MDB
- C:\Users\roman\ITU\BR_SPACE_v9.0\TEX_RESULTS\112000001\AP8_201020090532\AP8_RESULTS.MDB

- View Results Alt+F4
- Open Report Alt+F6
- Open Access Alt+F7
- Open Folder Alt+F7

Ap8Results Tool- What else...



Get details of the examination



Navigate the results



Re-arrange the view that better suits you



Get information per group, adm, affected notice etc...

Incoming groups

- Coordination Arc
- ΔT/T Up Case I
- ΔT/T Up Case II

Details

Wanted:	Interferer:	Earth Station:	Results:
114520011\UL2\11490500066\UJ2\9899TYPICAL-TK1 (6.4M)14002.75-14029.75	14125 MHz	130W263230N2435	ΔT/Ts=8.848399%
EC	14016.25 MHz	EC	Power Density Max- Noise Temperature-

Navigate Results

Ap8Results 1.0.0.0

Administration	Satellite name	Date of receipt	Status	Notification reason	Nominal longitude
USA	USASAT-55Y	1/9/2014	50	C	-76

Incoming Id	Existing Id	Finished Ok	Production	User name	Started at	Finished at	Run time
114520011	0	Y	Y	roman	9/28/2020 9:53:59 AM	9/28/2020 10:01:37 AM	7m38s

Results for each group of the incoming network

Drag a column header here to group by that column

Inc grp id	Coord prov	Aff ntc id	Satellite name	Adm/Ntwk o...	Nomi...	Inc beam name
114620755	9.41	99500228	EUTELSAT 3-12.5W	F/EUT	-12.5	UL1
114620755	9.41	103500132	JCSAT-2R	J	154	UL1
114620755	9.41	103500133	JCSAT-1R	J	150	UL1
114620755	9.41	103500280	EUTELSAT 3-7E	F/EUT	7	UL1
114620755	9.41	103500286	EUTELSAT 3-10E	F/EUT	10	UL1
114620755	9.41	103500287	EUTELSAT 3-13E	F/EUT	13	UL1
114620755	9.41	103500288	EUTELSAT 3-16E	F/EUT	16	UL1
114620755	9.41	103500312	EUTELSAT 3-21.5E	F/EUT	21.5	UL1
114620755	9.41	103500313	EUTELSAT 3-33E	F/EUT	33	UL1
114620755	9.41	103500314	EUTELSAT 3-36E	F/EUT	36	UL1
114620755	9.41	104500485	B-SAT-Q	B	-61	UL1
114620755	9.41	105500530	N-STAR-B2	J	136	UL1

Total: 1147

Print | MS Excel | Text | Image | Save Layout | My Layout

Select Result

C:\Users\roman\ITU\BR_SPACE_v9.0\TEXT_RESULTS\114520011\AP8_200928095357\AP8_RESULTS.MDB

Ap8Results: Navigate the results

View $\Delta T/T$ Details

Drag a column header here to group by that column

Inc grp id	Inc E/R	Inc beam name	Exi ntc id	Exi beam name
552	R	BEAM1R	109000001	RBEAM1

Details

Wanted:	Interferer:	Earth Station:	Results:
109000001\RBEAM1	112000001\BEAM1	TYPICAL ES1	29924-29986 MHz
29950 MHz	29960 MHz	030W521116N1544	DT/Ts=7.614356%
EC	EI		Power Density Max: Noise Temperature-

Export

Print MS Excel Text Image

Print

Appendix 8 Results: Cases of Coordination Arc

Inc grp id	Inc freq(MHz)	Inc E/R	Exi ntc id	Exi grp id	Coord prov	Agree st	Arc value
119719415	60625	R	101500482	105646065	9.7	A	7
119719417	60625	R	101500482	105646065	9.7	A	7
119719419	60625	R	101500482	105646065	9.7	A	7
119719421	60625	R	101500482	105646065	9.7	A	7
119719423	60625	R	101500482	105646065	9.7	A	7
119719425	60625	R	101500482	105646065	9.7	A	7
119719427	60625	R	101500482	105646065	9.7	A	7
119719429	60625	R	101500482	105646065	9.7	A	7
119719431	60625	R	101500482	105646065	9.7	A	7
119719433	60625	R	101500482	105646065	9.7	A	7
119719435	60625	R	101500482	105646065	9.7	A	7

Generate Report

SUMMARY FOR PROVISION 9.21/A B

THERE ARE NOT ANY POTENTIALLY AFFECTED ADMINISTRATION FOR THIS PROVISION

R RX	119719468	7GHz
R RX	119719469	7GHz
R RX	119719470	7GHz
R RX	119719471	7GHz

SUMMARY FOR PROVISION 9.7 A (COORDINATION ARC METHOD)

LIST OF POTENTIALLY AFFECTED ADMINISTRATIONS: ARS ARS/ARB AZE BLR CHN CYP D E ETH F G GRC HOL I IND IRN ISR J KAZ KOR LUX MCO MLA NIG OMA PAK THA TUR UAE UKR USA

E TOG	119719372	4GHz	ARS/ARB AZE BLR CHN CYP D E ETH F G GRC HOL IND IRN ISR KAZ KOR MCO MLA NIG PAK THA TUR UAE UKR
E TOG	119719373	4GHz	ARS/ARB AZE BLR CHN CYP D E ETH F G GRC HOL IND IRN ISR KAZ KOR MCO MLA NIG PAK THA TUR UAE UKR
E TOG	119719374	4GHz	ARS/ARB AZE BLR CHN CYP D E ETH F G GRC HOL IND IRN ISR KAZ KOR MCO MLA NIG PAK THA TUR UAE UKR

Filter, Group, Search

tehf Close

Inc grp id Exi grp id

Inc E/R	Inc beam name	Exi ntc_id	Exi beam name
E	TK1R	114520278	TEHF

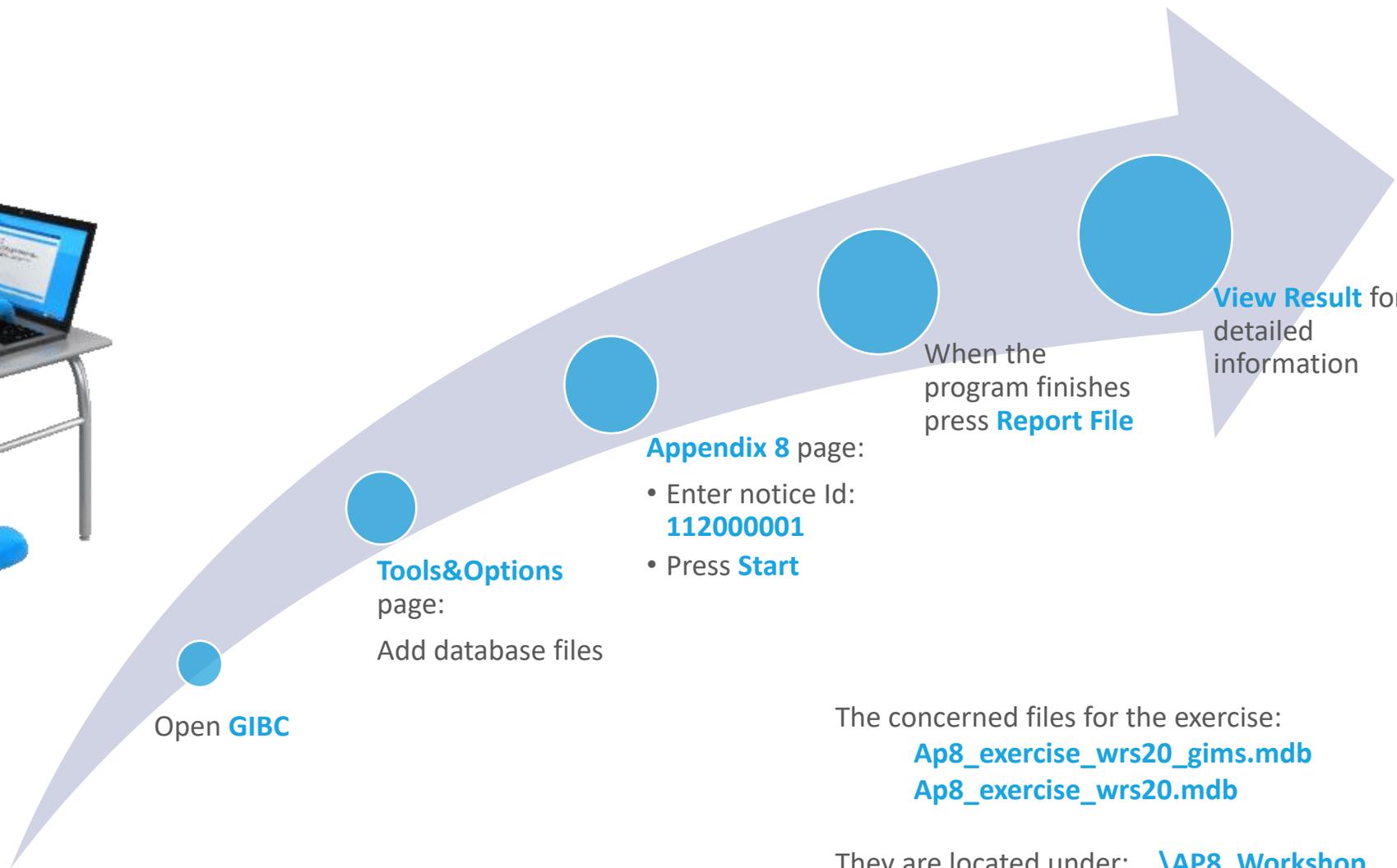
Rearrange columns

Affected Administrations

Inc grp id Drag a column header here to group by that column

Coord prov	Inc grp id	Adm/Ntwk org	Agree st
9.21/A	119719470		B
9.21/A	119719471		B
9.21/A	119719469		B
9.21/A	119719468		B
9.7	119719414	ARS/ARB	A

Appendix 8 Exercise Sum Up

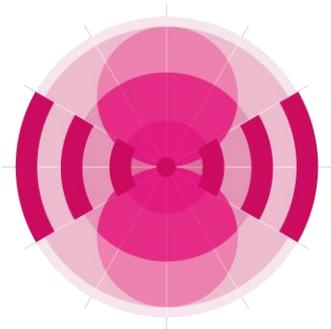


The concerned files for the exercise:

Ap8_exercise_wrs20_gims.mdb

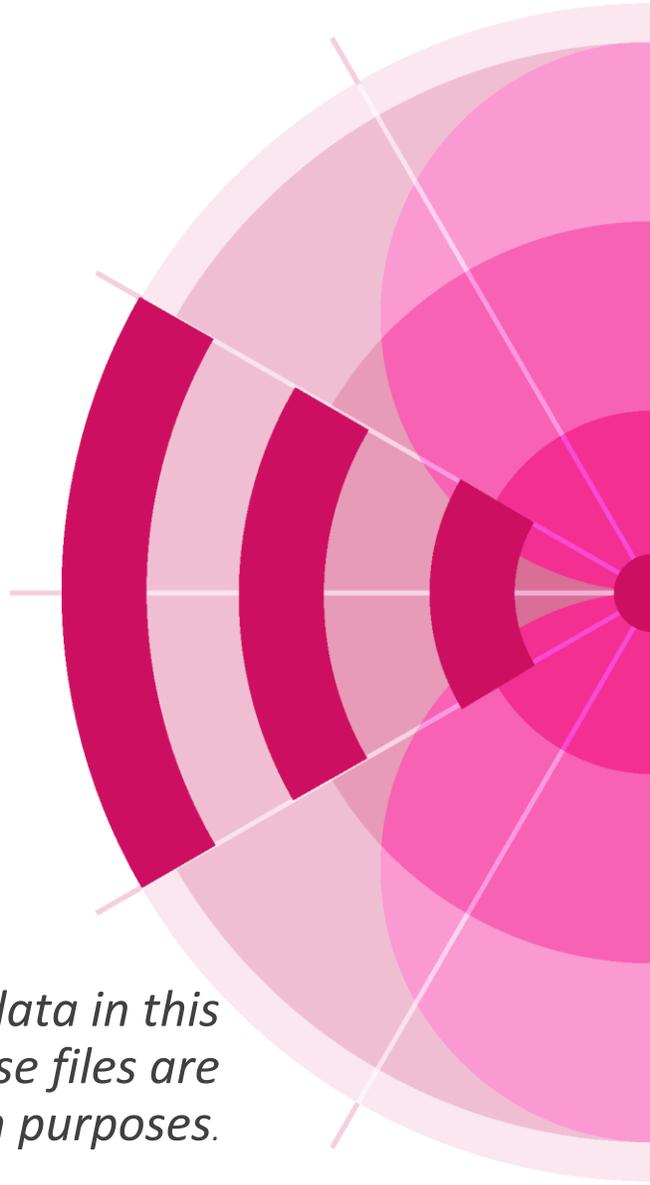
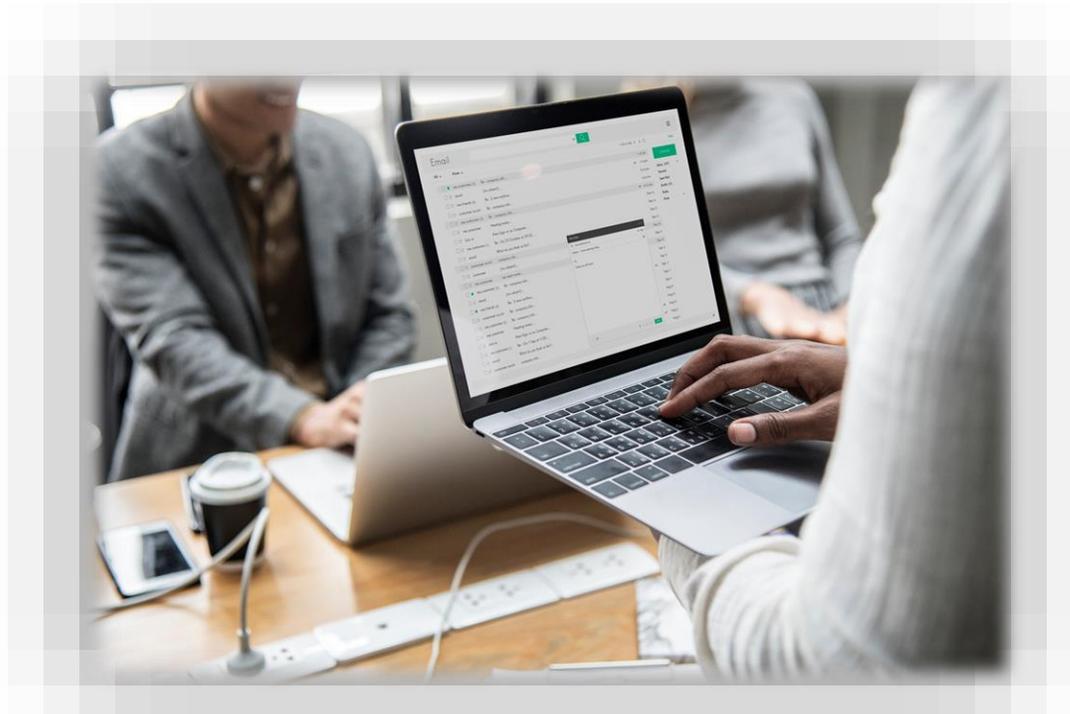
Ap8_exercise_wrs20.mdb

They are located under: ...\\AP8_Workshop



More information...

ITUWRS
GENEVA2020



brsas@itu.int

Please note that all the technical data in this presentation and associated exercise files are only intended for demonstration purposes.