

Space Plans Workshop (AP30/30A)

Exercise on viewing results of MSPACE available in BR IFICs

Presented by:

ITU-R/Space Services Department
Space Notification and Plans Division



Committed to connecting the world

Outline

General introduction of SPS Reporting Tool

Exercise on SPS_REPORTS

Exercise 1: Viewing results of a R1&3 BSS network

(file: [AP30_USABSS-34_mspace_results.mdb](#))

Exercise 2: Viewing results of a R1&3 BSS Feeder-link submission

(file: [AP30A_NSS-BSS 142E_mspace_results.mdb](#))

Exercise 3: Viewing results of a Region 2 submission

(file: [AP30-30A_NSS-BSS 58W_mspace_results.mdb](#))

Annex1: Where to get an install package of SPS

Annex2: Get Mspace results available in BR IFICs

SPS Reporting Tool

1. Its purposes:

- ✓ Listing affected networks with the worst excess/degradation
- ✓ Retrieving Reference Situation/Margin for each test point
- ✓ Displaying test points on a world map

from the results of MSPACEg analysis on an AP30/30A Article 4 network.

SPS Reporting Tool



2. Its Reports:

- ✓ “Compressed” report:
 - Affected network(s).
 - Affected Mspace beam(s).
 - Affected channel(s).
 - Worst excess/degradation.

- ✓ “Graphical” reports :
 - All test points.
 - Affected test points only.

- ✓ Reference Situation/ Findings report:
 - Reference situation vs margin for each test point.

The screenshot shows the 'Space Plans' System; Reporting Tool' interface. It includes a menu bar with 'File' and 'Help'. The main area contains several input fields and buttons:

- Findings/Reference Situation Database (F): C:\WRS_2010\SPS_Reporting\AP30_U
- MSPACEg Input File with Plan's / List's D.: C:\MG\PartA\USABSS-34\SPS_ALL_20
- Title of Analyses (from Input File):
- Description of Analyses (Given by the User): USABSS-34
- Plan/List Code (Id.): 00dn
- MSPACEg Version: 6.6.0.1
- Analysis Date/Time: Start Date/Time 28.07.2010 16:05:22, End Date/Time
- Applied Margin Degradation Limit (dB): 0.45
- Buttons: Compressed Report (selected), Graphical Report, Reference Situation / Findings Report, Show Report
- Footer: Select or Type Database Name with Reference Situation and Findings (I

Satellite Beam Name vs Mspace Beam Name

1. Regions 1 and 3: Mspace Beam Name = F(grp_id; design_emi)

s_beam : Table							
ntc_id	emi_rcp	beam_name	f_steer	pattern_id	pattern_id_x	gain	
199999999	E	INT		299	299	31.44	

beam_tr : Table								
ant_diam	pattern_id	design_emi	grp_id	pbeam_name	beam_name	emi_rcp	ntc_id	
0.9	290	33M0G7W--	16983	00000005	INT	E	199999999	

2. Region 2: Mspace Beam Name = F(grp_id_dn;grp_id_up;strapping)

s_beam : Table							
ntc_id	emi_rcp	beam_name	pattern_id	pattern_id_x	gain	f_steer	
199999999	E	R2T	300	300	28.21		
199999999	R	R2R	304	304	31.44		

pl_strap : Table						
ntc_id	freq_dn	freq_up	grp_id_dn	grp_id_up	f_victim_op	
199999999	12224	17324	14268	14269	N	
199999999	12253.16	17353.16	14268	14269	N	
199999999	12282.32	17382.32	14268	14269	N	
199999999	12311.48	17411.48	14268	14269	N	

beam_tr : Table								
ant_diam	pattern_id	design_emi	grp_id	pbeam_name	beam_name	emi_rcp	ntc_id	
0.6	292	24M0G7W--	14268	00000001	R2T	E	199999999	
7	297	24M0G7W--	14269	00000001	R2R	R	199999999	

You are now requested to do one of the following exercises:

- Exercise 1: Viewing results of a R1&3 BSS network
(file: [AP30_USABSS-34_mspace_results.mdb](#))
- Exercise 2: Viewing results of a R1&3 BSS Feeder-link submission
(file: [AP30A_NSS-BSS 142E_mspace_results.mdb](#))
- Exercise 3: Viewing results of a Region 2 submission
(file: [AP30-30A_NSS-BSS 58W_mspace_results.mdb](#))

Step by step to do exercise

1. Copy folder “Space Plans” under “\Workshop\Space” from the USB key to your C drive.
2. Find Mspace results database under:

“\Space Plans\4_A30_30A SPS_REPORTs exercise\Exercise\”

Name	Size	Type
AP30A_NSS-BSS 142E_mspace_results.mdb	11,952 KB	Microsoft Office Access Database
AP30_USABSS-34_mspace_results.mdb	26,384 KB	Microsoft Office Access Database
AP30-30A_NSS-BSS 58W_mspace_results.mdb	11,996 KB	Microsoft Office Access Database

3. Install a new SPS package. Set-up file under:

“\Space Plans\4_A30_30A SPS_REPORTs exercise\”

Name	Size	Type
Exercise		File Folder
SPS 6.7.0.1 Setup.exe	8,237 KB	Application
WS_AP30_30A_SPS_Reports.ppt	1,721 KB	Microsoft Office Po...

4. Run SPS_Reports (v3.6.0.1) on the selected Mspace results database to: (*see slides 9-17 for Exercise 1, 18-26 for Exercise 2 and 27-35 for Exercise 3 for step by step to view Mspace results with SPS_Reports*)

- ✓ Create Compressed Report
- ✓ Create Graphical Report
- ✓ Create Reference Situation/Findings Report

Any Questions?

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Software: brsas@itu.int

Exercise 1

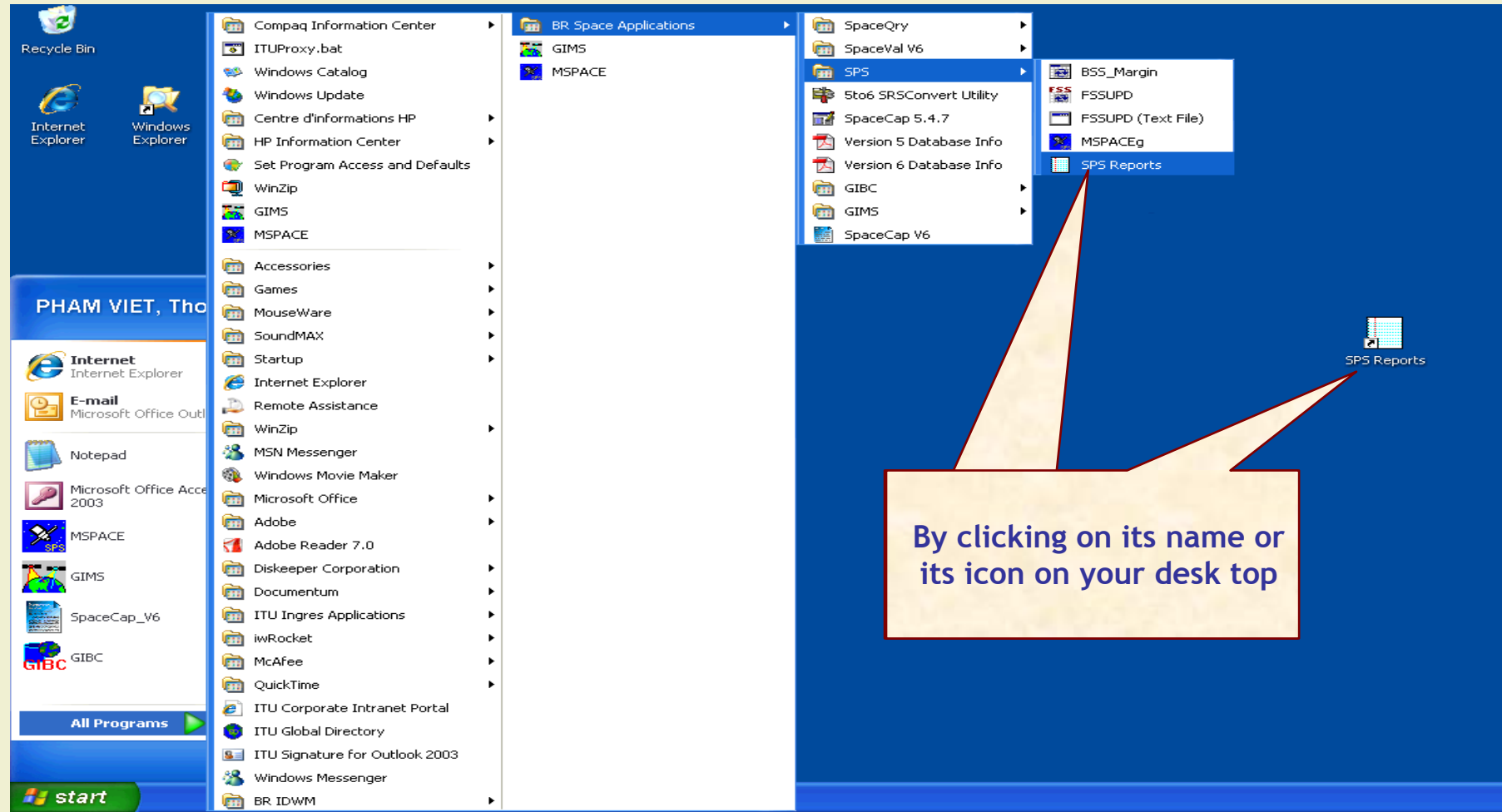
Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool

A large, faint, white wireframe globe graphic is centered in the background of the slide.

Exercise 1: Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool



1. Start SPS Reporting Tool

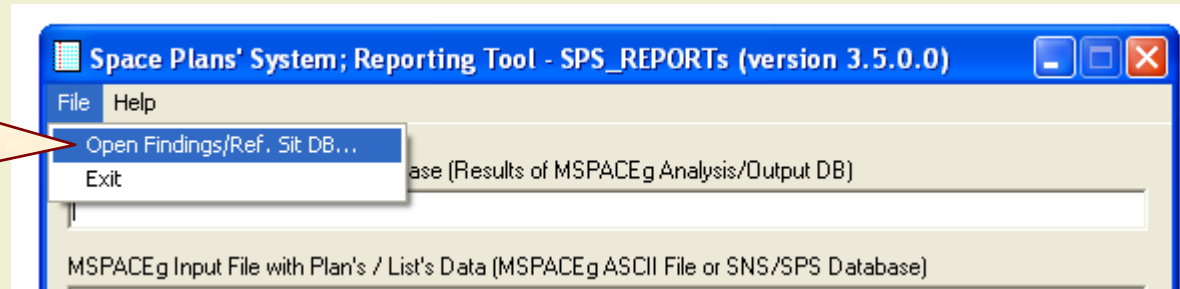


Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool (Cont.)

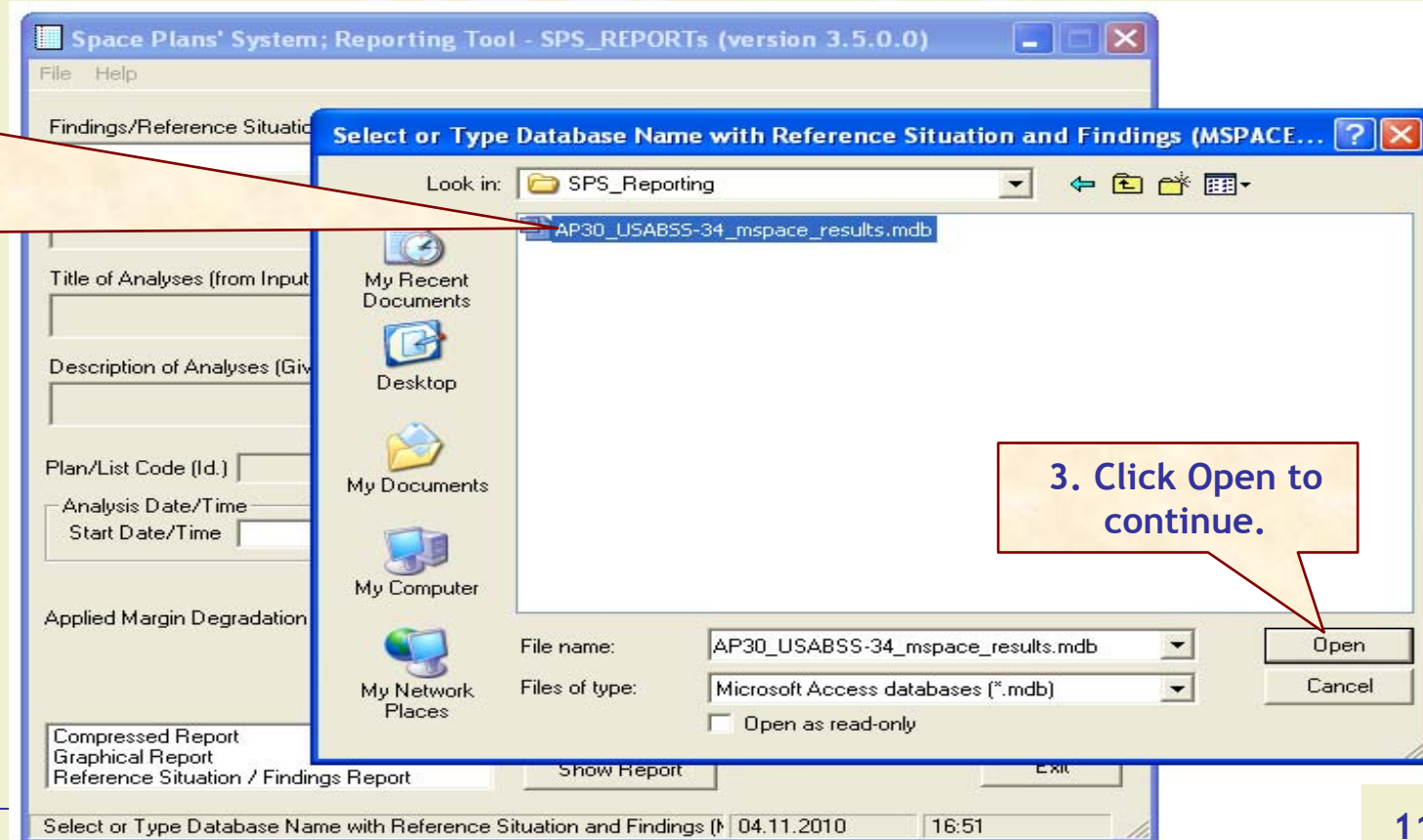


2. Select an Mspace results database

1. Click Open Findings/Ref. Sit DB...



2. Select a MSPACE results database containing the results of analysis for the R1&3 BSS network.



3. Click Open to continue.

Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool (Cont.)



3. Select a version to analyze

Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.5.0.0)

File Help

Findings/Reference Situation Database (Results of MSPACEg Analysis/Output DB)
C:\WRS_2010\SPS_Reporting\AP30_USABSS-34_mspace_results.mdb

MSPACEg Input File with Plan's / List's Data (MSPACEg ASCII File or SNS/SPS Database)

Title of Analyses (from Input File)

Select Plan/List which you want to analyse....

Please, choose a Plan, which you want to analyze from the list below (by clicking on the related row) and click on OK button

Analysis Version	Plan Id	Title in MSPACEg ASCII Input File	Analysis Description by the User
1	00dn	USABSS-34	USABSS-34

OK Cancel

Compressed Report
Graphical Report
Reference Situation / Findings Report

Show Report Exit

Select or Type Database Name with Reference Situation and Findings (↑) 04.11.2010 17:02

1. Select one version each time.
2. Click on OK.

Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool(Cont.)



4. Select a report

1. Select one report each time.
2. Click “Show Report”

The screenshot shows the 'Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.5.0.0) window. The interface includes a menu bar (File, Help), several text input fields for file paths and analysis details, and a list of report types at the bottom. The 'Compressed Report' option is selected in the list. A 'Show Report' button is visible next to the list, and an 'Exit' button is at the bottom right. A status bar at the bottom shows the database name and a timestamp.

Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.5.0.0)

File Help

Findings/Reference Situation Database (Results of MSPACEg Analysis/Output DB)
C:\WRS_2010\SPS_Reporting\AP30_USABSS-34_mspace_results.mdb

MSPACEg Input File with Plan's / List's Data (MSPACEg ASCII File or SNS/SPS Database)
C:\MG\PartA\USABSS-34\SPS_ALL_20100716_USABSS-34.mdb

Title of Analyses (from Input File)
[Empty field]

Description of Analyses (Given by the User)
USABSS-34

Plan/List Code (Id.) 00dn MSPACEg Version 6.6.0.1 Selected Analysis Version 1

Analysis Date/Time
Start Date/Time 28.07.2010 16:05:22 End Date/Time 28.07.2010 18:43:32

Applied Margin Degradation Limit (dB) 0.45

Compressed Report
Graphical Report
Reference Situation / Findings Report

Show Report Exit

Select or Type Database Name with Reference Situation and Findings (↑ 04.11.2010 17:06

Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool (Cont.)



4.1 Compressed Report / Draft of Special Section

"Compressed" Report (Affected Beams/Channels)

File

Affected Beams and Channels(sorted by Orbital Position)

Orb.Pos.	Adm.	Beam Name	PFD Criterion (An.1 to App.30)		EPM Criterion (An.1 to App.30)		EPM and PFD Criteria		
			Identified Channels	Excess	Chan. where Degrad. >0.45	Degrac	Affected Channels	Excess	Degrac
-33.50	DNK	DNK090XR	29,33	11.46	29,33	12.307	29,33	11.46	12.307
		DNK091XR	31,35	11.37	31,35	8.528	31,35	11.37	8.528
	G	10011968	29,31,33,35,37,39	12.62	29,31,33,35,37,39	13.137	29,31,33,35,37,39	12.62	13.137
		10011969	30,32,34,36,38,40		13.130	30,32,34,36,38,40	13.130		
	ISL	ISL04900	29,31,33,35,37,39	11.21	31,33,35,37,39	5.902	31,33,35,37,39	11.21	5.902
SRL	SRL25900	29,31,33,35,37,39	12.59	29,31,33,35,37,39	7.859	29,31,33,35,37,39	12.59	7.859	
-31.50	USA	10017700	30,32,34,36,38,40	29.24	30,32,34,36,38,40	33.487	30,32,34,36,38,40	29.24	33.487
		10017701	30,32,34,36,38,40		33.487	30,32,34,36,38,40	33.487		
		10017702	31,33,35,37,39		33.859	31,33,35,37,39	33.859		
		10017703	30,32,34,36,38,40		26.073	30,32,34,36,38,40	26.073		
		10017704	30,32,34,36,38,40		26.073	30,32,34,36,38,40	26.073		
		10017705	30,32,34,36,38,40		26.073	30,32,34,36,38,40	26.073		
		10017706	31,33,35,37,39		26.106	31,33,35,37,39	26.106		
-30.00	BFA	BFA10700	30,32,34,36,38,40	15.65	30,32,34,36,38,40	12.753	30,32,34,36,38,40	15.65	12.753
		E_100	29,31,33,35,37,39	15.20	29,31,33,35,37,39	11.693	29,31,33,35,37,39	11.693	
	10013235	29,31,33,35,38,40	20.621		29,31,33,35,38,40	20.621			
	10013236	29,31,33,35,38,40	20.621		29,31,33,35,38,40	20.621			
	10013237	29,31,33,35,38,40	20.621	29,31,33,35,38,40	20.621				
10013238	29,31,33,35,38,40	20.621	29,31,33,35,38,40	20.621					

Data Presentation Options

Cells' Merging: Merge Cells, No Cell Merging

Rows' Sorting (also for print): By Orbital Position, By Administration

Affected Channels using: PFD or EPM Criteria, PFD and EPM

Buttons: Reproduce Report, Print Report, Create Draft of Special Section (in RTF format), Show Output DB Structure

1. Select "Data Presentation Options"
2. Click "Reproduce Report"

Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool (Cont.)



4.1 Compressed Report / Draft of Special Section (Cont.)

"Compressed" Report (Affected Beams/Channels)

File

Affected Beams and Channels(sorted by Orbital Position)

Orb.Pos.	Adm.	Beam Name	PFD Criterion (An.1 to App.30)		EPM Criterion (An.1 to App.30)		EPM and PFD Criteria				
			Identified Channels	Excess	Chan. where Degrad. >0.45	Degrac	Affected Channels	Excess	Degrac		
-33.50	DNK	DNK090XR	29,33	11.46	29,33	12.307	29,33	11.46	12.307		
		DNK091XR	31,35	11.37	31,35	8.528	31,35	11.37	8.528		
	G	10011968	29,31,33,35,37,39	12.62	29,31,33,35,37,39	13.137	29,31,33,35,37,39	12.62	13.137		
		10011969	30,32,34,36,38,40		30,32,34,36,38,40	13.130	30,32,34,36,38,40		13.130		
	ISL	ISL04900	29,31,33,35,37,39	11.21	31,33,35,37,39	5.902	31,33,35,37,39	11.21	5.902		
SRL	SRL25900	29,31,33,35,37,39	12.59	29,31,33,35,37,39	7.859	29,31,33,35,37,39	12.59	7.859			
-31.50	USA	10017700	30,32,34,36,38,40	29.24	30,32,34,36,38,40	33.487	30,32,34,36,38,40	29.24	33.487		
		10017701	31,33,35,37,39		31,33,35,37,39	33.859	31,33,35,37,39		33.859		
		10017702			30,32,34,36,38,40	26.073	30,32,34,36,38,40		26.073		
		10017703	31,33,35,37,39		26.106	31,33,35,37,39	26.106				
		10017704	30,32,34,36,38,40		15.65	30,32,34,36,38,40	12.753		30,32,34,36,38,40	15.65	12.753
		10017705	29,31,33,35,37,39			11.693	29,31,33,35,37,39		11.693		
		10017706	29,31,33,35,38,40			15.20	29,31,33,35,38,40		20.621	29,31,33,35,38,40	15.20
10017707	29,31,33,35,37,39	20.621	29,31,33,35,38,40	20.621							
-30.00	E	BFA10700	30,32,34,36,38,40	15.65	30,32,34,36,38,40	12.753	30,32,34,36,38,40	15.65	12.753		
		E____100	29,31,33,35,37,39	15.20	29,31,33,35,37,39	11.693	29,31,33,35,37,39	11.693			
		10013235	29,31,33,35,38,40		20.621	20.621	20.621				
		10013236									
		10013237									
10013238											

Data Presentation Options

Cells' Merging: Merge Cells, No Cell Merging

Rows' Sorting (also for print): By Orbital Position, By Administration

Affected Channels using: PFD or EPM Criteria, PFD and EPM

Buttons: Reproduce Report, Print Report, Create Draft of Special Section (in RTF format), Show Output DB Structure

Click here to produce print version of this report. A message will appear to inform you of the location of the resulting file.

Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool (Cont.)



4.2 Graphical Report

Each row could contain multiple criteria.

The screenshot shows the 'Graphical' Report application window. At the top, there is a menu bar with 'File'. Below it is a search section titled 'Find Test Points Belonging to Lists of Administrations, Satellites, Beams, Channels'. Underneath, 'Criteria Used for Graphical Report/Query (an empty box means any value)' is specified with the following fields: Administrations: AFG, Sat.Network Id: AFG__100, Beam Names: (empty), and Channels: (empty). To the right of these fields is an 'Available Values' section with four dropdown menus containing: AFG, AFG__100, DECME66, and 1. A text box next to it says: 'Select criteria from combo boxes (click on wanted ones) or type criteria values in the text boxes. Delete unnecessary values from lists in the boxes on the left.' Below the search section is a map showing a geographical area with a grid. The y-axis is labeled with latitudes 30.0N, 33.0N, 36.0N, and 39.0N. The x-axis is labeled with longitudes 60.0E, 63.0E, 66.0E, 69.0E, 72.0E, and 75.0E. Several red 'x' marks are plotted on the map, representing test points. To the right of the map are two buttons: 'Copy Map onto Clipboard' and 'Run Query and Plot Map'. At the bottom of the window, there is a status bar that says 'Done... You may prepare and run a new query.' and a checkbox labeled 'Plot Affected Test Points only' which is currently checked.

1. Select criteria for the query.
2. Click "Run Query and Plot Map to view the report".

Select this option to display only affected test points.

Exercise 1 : Viewing results of MSPACE for a R1&3 BSS network with SPS Reporting Tool(Cont.)



4.3 Reference Situation/Findings Report

Each row could contain multiple criteria.

Reference Situation / Calculated Margin Report (Query System)

Search Criteria
Criteria Used for Report/Query - empty box means any value

Administrations: G
 Longitude: -33.5
 Nominal degrees: 10011968
 Beam Names: 10011968
 Channels: 2
 Satellite: AFG_100
 Network Id.(s):

Available Values
 G
 -33.5
 10011968
 2
 AFG_100

Legend
 Affected Test Point: -4.340, -8.147, 17.091
 Affected Channel: 13
 "EPM Affected" Point: -7.790, -9.222
 "PFD Affect." TP: 2.940, 2.072, 9.782

Select (or type) criteria from combo boxes on the right (click on wanted ones). Delete not required search criteria from the boxes above.
 Output sorted by Administration, Longitude Nominal, Beam Name, Channel
 --- No value for this test point [Reference Situation, max(PFD Excess)]

Retrieve Ref.Sit./ Margin

Test Points' Coordinates (Longitude/Latitude) degrees

Adm.	Orb.Pos.	Beam Name	Ch.	TP 6 Ref.Sit Margin PFDexc.	TP 7 Ref.Sit Margin PFDexc.	TP 8 Ref.Sit Margin PFDexc.	TP 9 Ref.Sit Margin PFDexc.	TP 10 Ref.Sit Margin PFDexc.	TP 11 Ref.Sit Margin PFDexc.	TP 12 Ref.Sit Margin PFDexc.	TP 13 Ref.Sit Margin PFDexc.	TP 14 Ref.Sit Margin PFDexc.	TP 15 Ref.Sit Margin PFDexc.	TP 16 Ref.Sit Margin PFDexc.
	Sat.Network Id.: UKDIGISAT-4A			3.10*	-8.70*	22.60*	-4.30*	21.90*	22.10*	-9.50*	-5.00*	18.20*	5.50*	
				39.70*	42.90*	43.90*	48.20*	48.90*	53.80*	54.10*	58.00*	59.49*	60.20*	
G	-33.50	10011968	29	-6.800	-6.388	-1.618	-5.678	-2.067	-10.265	-3.447	-12.022	-19.671	-20.271	
				-7.252	-6.861	-2.814	-6.147	-3.123	-10.442	-4.273	-12.176	-19.694	-20.295	
				12.456	12.257	11.581	12.024	11.418	11.261	11.714	11.542	11.186	11.357	
			31	-7.800	-7.670	-0.915	-5.908	-1.657	-2.203	-5.580	-13.458	-4.209	-4.869	
				-13.790	-13.531	-12.657	-12.661	-12.598	-12.678	-12.998	-16.334	-13.316	-14.028	
				12.456	12.257	11.581	12.024	11.418	11.261	11.714	11.542	11.186	11.357	
			33	-6.914	-6.461	-1.426	-5.727	-1.878	-10.236	-3.341	-12.002	-19.667	-20.267	
				-13.583	-13.248	-12.693	-12.624	-12.616	-14.381	-12.669	-15.644	-20.471	-21.091	
				12.456	12.257	11.581	12.024	11.418	11.261	11.714	11.542	11.186	11.357	
			35	-7.926	-7.794	-0.873	-6.012	-1.619	-2.168	-5.568	-13.455	-4.183	-4.845	
				-13.822	-13.563	-12.654	-12.683	-12.595	-12.675	-12.996	-16.332	-13.312	-14.025	
				12.456	12.257	11.581	12.024	11.418	11.261	11.714	11.542	11.186	11.357	
			37	-8.118	-7.733	-0.984	-5.532	-1.533	-1.842	-2.530	-5.452	-2.574	-3.214	
				-13.872	-13.547	-12.662	-12.584	-12.588	-12.647	-12.581	-13.861	-13.145	-13.851	

6 rows displayed. You may specify different criteria and run your next query if you wish

RTF Report Close

Reference Situation for the test point

Calculated Margin for the test point

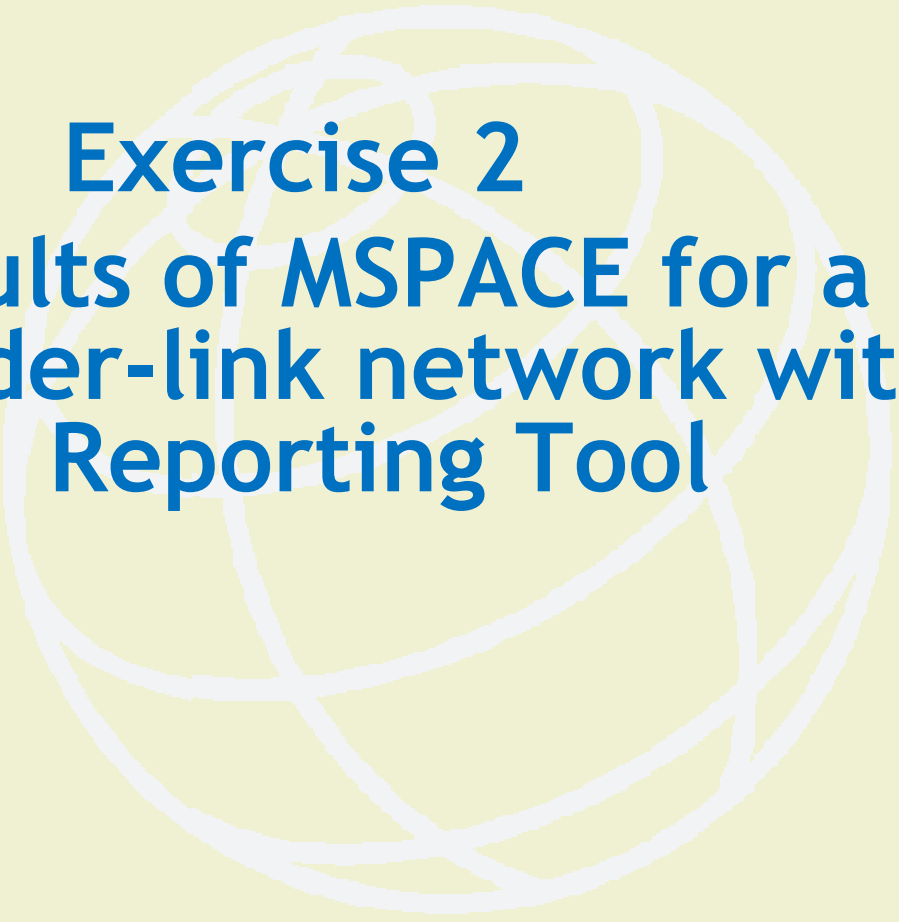
Maximum PFD excess at the test point

Click here to retrieve Ref.Sit./Margin

Click here to produce print version of this report. A message will appear to inform you of the location of the resulting file.

Exercise 2

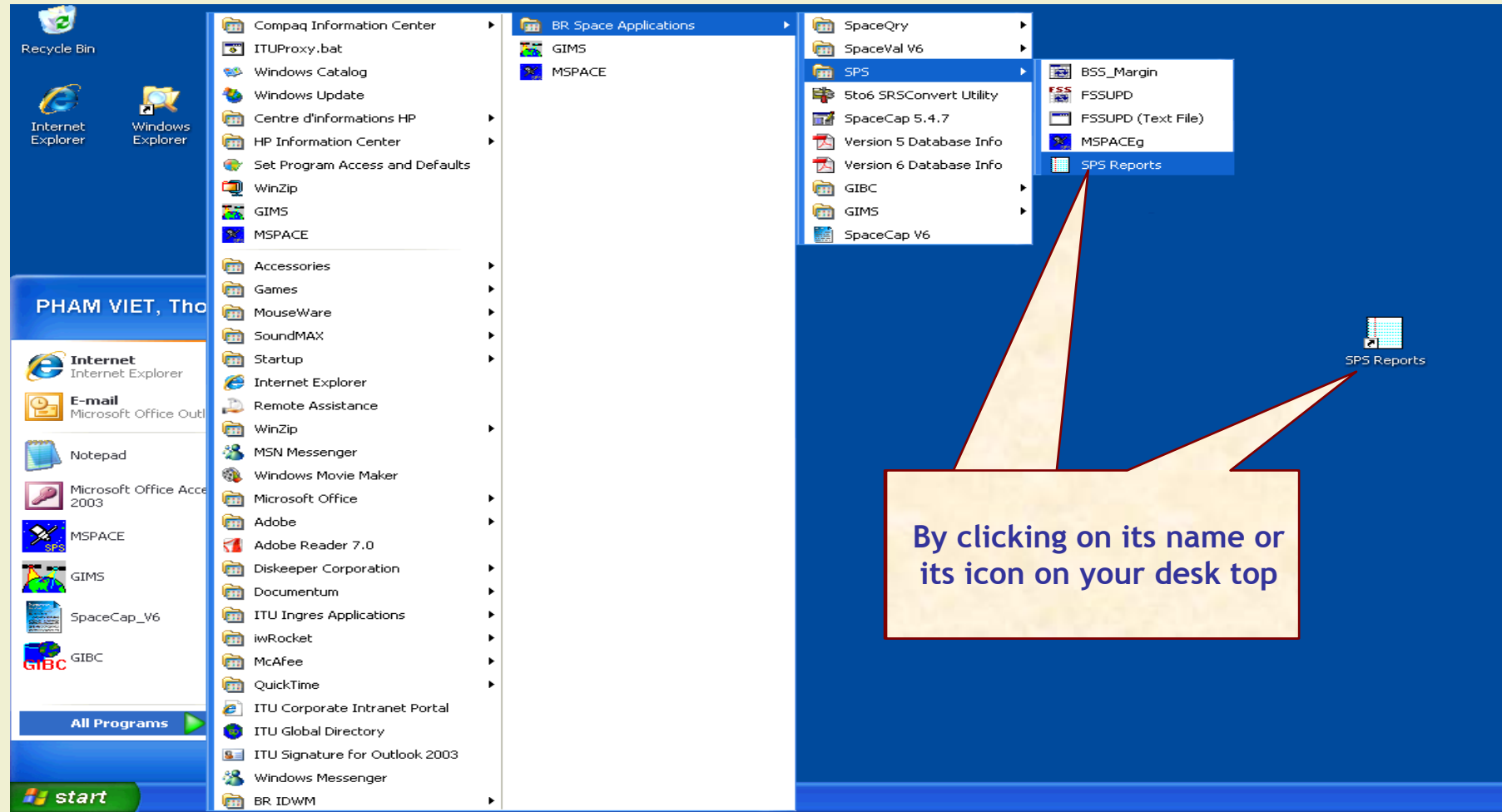
Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool

A large, faint, white wireframe globe graphic is centered in the background of the slide.

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool



1. Start SPS Reporting Tool

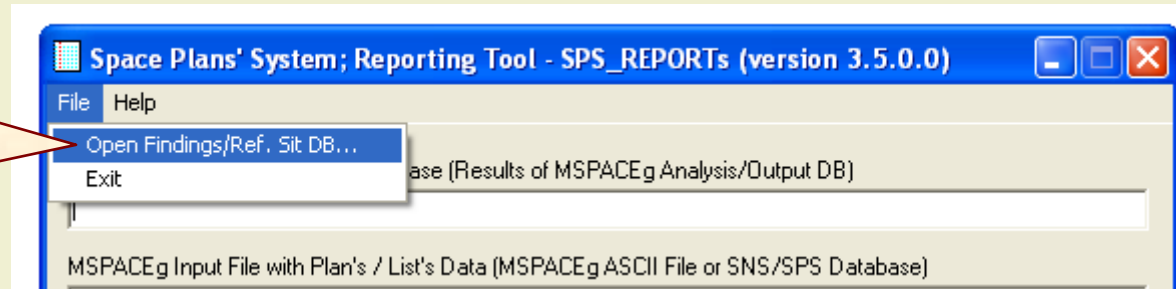


Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)

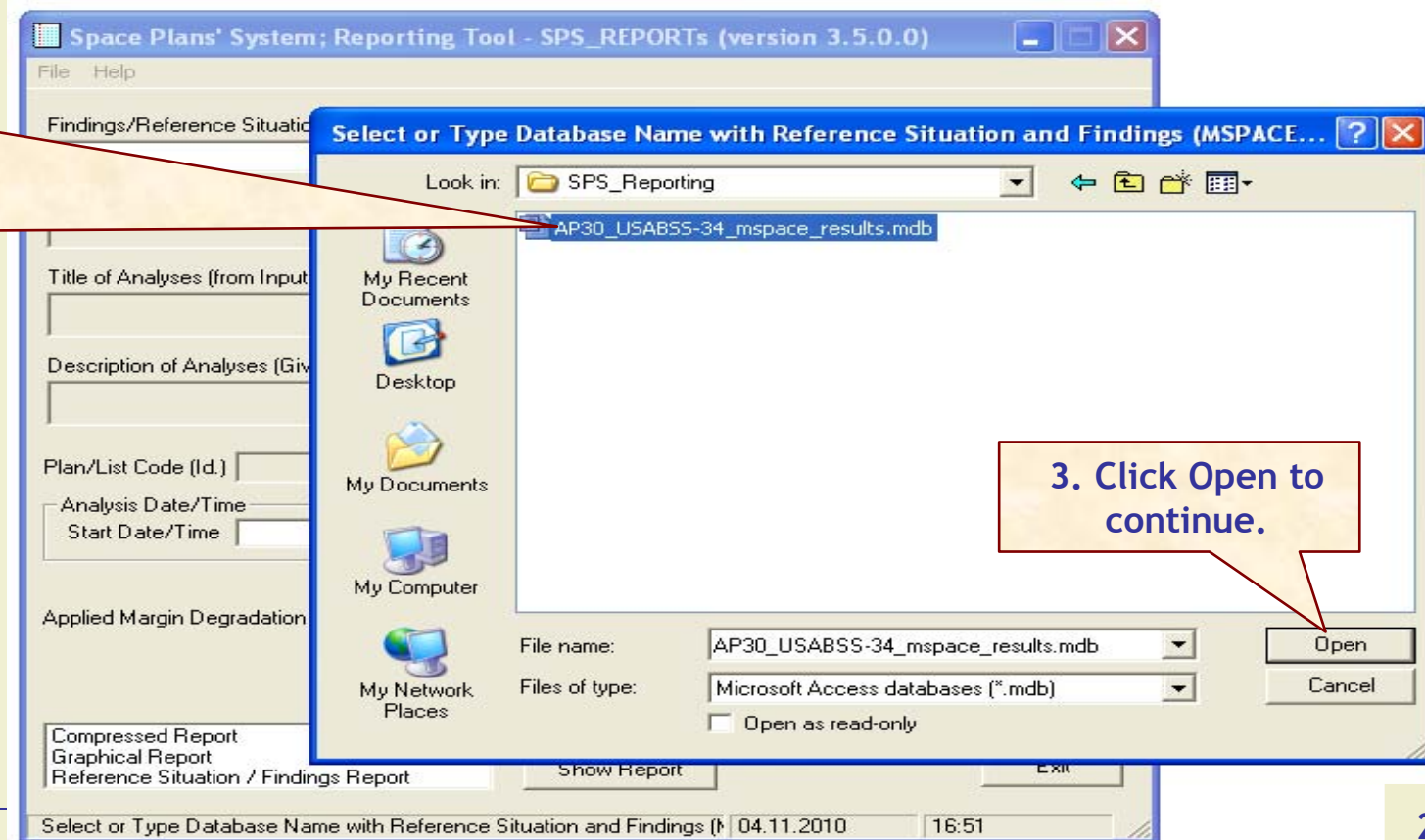


2. Select an Mspace results database

1. Select Open Findings/Ref. Sit DB...



2. Select MSPACE results database containing the results of analysis for the R1&3 BSS network.



3. Click Open to continue.

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)



3. Select a version to analyze

The screenshot shows the 'Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.6.0.1) window. The main window displays the file path 'C:\WRS_2010\SPS_Reporting\AP30A_NSS-BSS 142E_mspace_results.mdb'. A dialog box titled 'Select Plan/List which you want to analyse....' is overlaid on the main window. The dialog box contains a table with the following data:

Analysis Version	Plan Id	Title in MSPACEg ASCII Input File	Analysis Description by the User
1	00u1		
2	00u2		17 GHz part of merged Regions 1&3 Feeder-link Plan/List

The dialog box also has 'OK' and 'Cancel' buttons. Below the dialog box, the main window shows a 'Graphical Report' dropdown menu, a 'Reference Situation / Findings Report' dropdown menu, and 'Show Report' and 'Exit' buttons. The status bar at the bottom of the main window shows '23.11.2010' and '14:50'.

1. Select one version each time.
2. Click OK.

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)



4. Select a report

1. Select one report each time.
2. Click “Show Report”

Space Plans' System; Reporting Tool - SPS_REPORTS (version 3.5.0.0)

File Help

Findings/Reference Situation Database (Results of MSPACEg Analysis/Output DB)
C:\WRS_2010\SPS_Reporting\AP30_USABSS-34_mspace_results.mdb

MSPACEg Input File with Plan's / List's Data (MSPACEg ASCII File or SNS/SPS Database)
C:\MG\PartA\USABSS-34\SPS_ALL_20100716_USABSS-34.mdb

Title of Analyses (from Input File)

Description of Analyses (Given by the User)
USABSS-34

Plan/List Code (Id.) 00dn MSPACEg Version 6.6.0.1 Selected Analysis Version 1

Analysis Date/Time
Start Date/Time 28.07.2010 16:05:22 End Date/Time 28.07.2010 18:43:32

Applied Margin Degradation Limit (dB) 0.45

Compressed Report
Graphical Report
Reference Situation / Findings Report

Show Report Exit

Select or Type Database Name with Reference Situation and Findings (↑ 04.11.2010 17:06)

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)



4.1 Compressed Report / Draft of Special Section

"Compressed" Report (Affected Beams/Channels)

File

Affected Beams and Channels(sorted by Orbital Position)

EPM Criterion (An.1 to App.30)

Orb.Pos.	Adm.	Beam Name	Channels Identified as Affected (App.30A, Ann.1, Sect.4)	Max.Degrad	Sat.Network Id.	Band GHz
140.00	RUS	RSTRSD51	25	0.722	RST-5	17
142.00	HOL	10017780	9,11,13,15,17,19,21,23	0.702	NSS-BSS 142E	17
		10017781	12,14,16,18,20,22	0.591		17
		10017782	11,13,15,17,19,21,23	0.688		17
		10017783	12,14,16,18,20,22	0.602		17

1. Select "Data Presentation Options"
2. Click "Reproduce Report"

Data Presentation Options

Cells' Merging

Merge Cells

No Cell Merging

Rows' Sorting (also for print)

By Orbital Position

By Administration

Reproduce Report

Print Report

Create Draft of Special Section (in RTF format)

Show Output DB Structure

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)



4.1 Compressed Report / Draft of Special Section (Cont.)

"Compressed" Report (Affected Beams/Channels)

File

Affected Beams and Channels(sorted by Orbital Position)

EPM Criterion (An.1 to App.30)

Orb.Pos.	Adm.	Beam Name	Channels Identified as Affected (App.30A, Ann.1, Sect.4)	Max.Degrad	Sat.Network Id.	Band GHz
140.00	RUS	RSTRSD51	25	0.722	RST-5	17
142.00	HOL	10017780	9,11,13,15,17,19,21,23	0.702	NSS-BSS 142E	17
		10017781	12,14,16,18,20,22	0.591		17
		10017782	11,13,15,17,19,21,23	0.688		17
		10017783	12,14,16,18,20,22	0.602		17

Click here to produce print version of this report. A message will appear to inform you of the location of the resulting file.

Data Presentation Options

Cells' Merging
 Merge Cells
 No Cell Merging

Rows' Sorting (also for print)
 By Orbital Position
 By Administration

Reproduce Report
 Print Report
 Create Draft of Special Section (in RTF format)
 Show Output DB Structure

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)



4.2 Graphical Report

Each row could contain multiple criteria.

The screenshot shows the 'Graphical' Report tool interface. At the top, there is a search bar with the text 'Find Test Points Belonging to Listed Administrations, Satellites, Beams, Channels'. Below this, there are several input fields: 'Administrations' (set to 'RUS'), 'Sat.Network Id', 'Beam Names', and 'Channels'. To the right, there is an 'Available Values' section with four dropdown menus containing 'RUS', 'AFG24501', '00003545', and '1'. A text box next to these dropdowns explains: 'Select criteria from combo boxes (click on wanted ones) or type criteria values in the text boxes. Delete unnecessary values from lists in the boxes on the left.' Below the search fields is a world map with a grid. The map shows red 'x' markers indicating affected test points, primarily concentrated in Europe and Africa. To the right of the map are two buttons: 'Copy Map onto Clipboard' and 'Run Query and Plot Map'. At the bottom of the map area, there is a checkbox labeled 'Plot Affected Test Points only'. A status bar at the bottom left says 'Done... You may prepare and run a new query.'

1. Select criteria for the query.
2. Click "Run Query and Plot Map to view the report".

Select this option to display only affected test points.

Exercise 2 : Viewing results of MSPACE for a R1&3 BSS Feeder-link network with SPS Reporting Tool (Cont.)



4.3 Reference Situation/Findings Report

Each row could contain multiple criteria.

Reference Situation / Calculated Margin Report (Query System)

Search Criteria
 Criteria Used for Report/Query - empty box means any value

Administrations: RUS
 Longitude: 140
 Nominal degrees: 140
 Beam Names:
 Channels:
 Satellite:
 Network Id.(s):

Available Values
 RUS
 140
 00003545
 1
 AFG24501

Legend
 Affected Test Point: -0.360, -0.985
 Affected Channel: 13

Select (or type) criteria from combo boxes on the right (click on wanted ones). Delete not required search criteria from the boxes above.
 Output sorted by Administration, Longitude Nominal, Beam Name, Channel
 N/E - Non-Existing Reference Situation (Additions, Modifications, No Interference)

Test Points' Coordinates (Longitude Latitude) degrees

Adm.	Orb.Pos.	Beam Name	Ch.	TP 1 Ref.Sit Margin	TP 2 Ref.Sit Margin	TP 3 Ref.Sit Margin	TP 4 Ref.Sit Margin	TP 5 Ref.Sit Margin	TP 6 Ref.Sit Margin	TP 7 Ref.Sit Margin	TP 8 Ref.Sit Margin	TP 9 Ref.Sit Margin	TP 10 Ref.Sit Margin	TP 11 Ref.Sit Margin
Sat.Network Id.: RST-5				145.48° 43.60°	87.30° 49.22°	107.50° 50.60°	137.60° 50.80°	168.18° 54.43°	77.00° 60.88°	179.50° 62.68°	-170.00° 66.00°	162.46° 69.62°	128.40° 73.29°	
RUS	140.00	RSTRSD51	25	2.978 2.194	2.074 1.290	3.699 2.915	3.776 2.992	1.150 0.366	3.828 3.044	1.230 0.446	0.062 -0.722	2.894 2.110	3.294 2.510	
		RSTRSD51	27	10.010	9.107	10.732	10.809	8.183	10.860	8.263	7.095	9.927	10.327	
		RSTRSD51	29	5.935 4.501	5.031 3.597	6.656 5.222	6.733 5.299	4.107 2.673	6.785 5.351	4.188 2.754	3.020 1.586	5.852 4.418	6.251 4.817	
		RSTRSD51	31	4.545 3.459	3.641 2.555	5.266 4.180	5.343 4.257	2.717 1.631	5.395 4.309	2.798 1.712	1.630 0.544	4.462 3.376	4.862 3.776	
		RSTRSD51	33	4.545 3.459	3.641 2.555	5.266 4.180	5.343 4.257	2.717 1.631	5.395 4.309	2.797 1.712	1.630 0.544	4.461 3.376	4.861 3.775	
		RSTRSD51	35	4.545 3.459	3.641 2.555	5.266 4.180	5.343 4.257	2.717 1.631	5.395 4.309	2.797 1.712	1.630 0.544	4.461 3.376	4.861 3.775	
		RSTRSD51	37	4.545 3.470	3.641 2.567	5.266 4.192	5.343 4.268	2.717 1.642	5.395 4.320	2.798 1.723	1.630 0.555	4.462 3.387	4.862 3.787	
		RSTRSD51	39	4.545	3.641	5.266	5.343	2.717	5.395	2.797	1.630	4.462	4.861	

16 rows displayed. You may specify different criteria and run your next query if you wish

RTF Report Close

Reference Situation for the test point

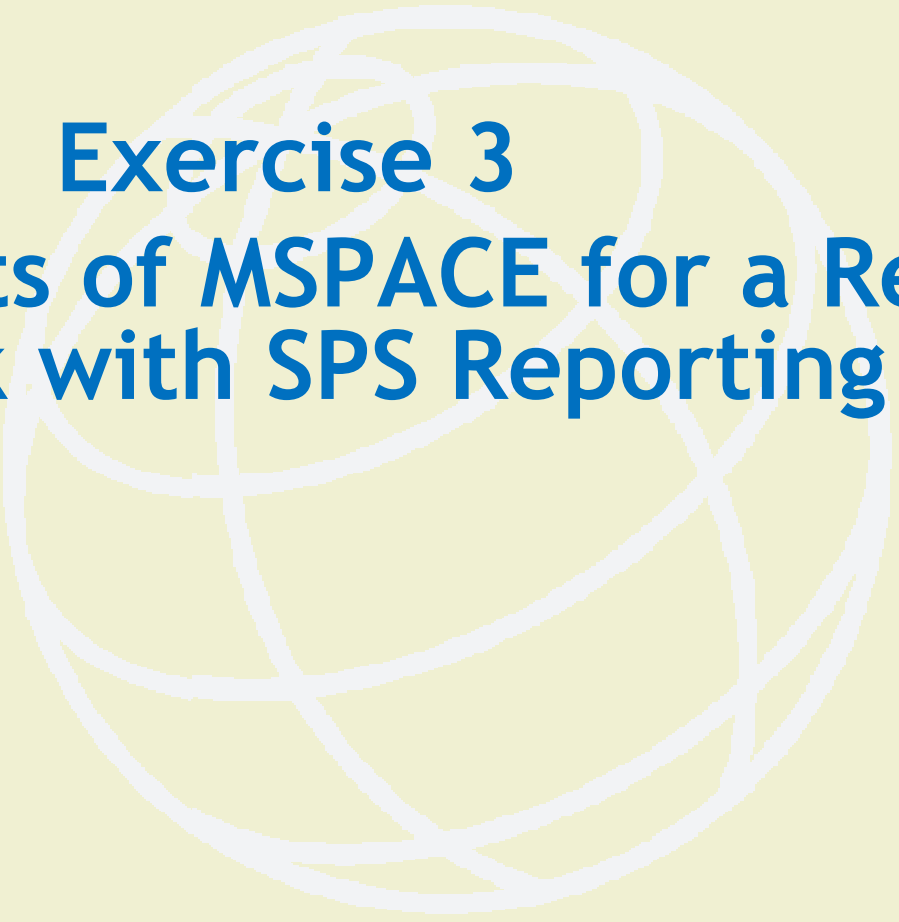
Calculated Margin for the test point

Click here to retrieve Ref.Sit./Margin

Click here to produce print version of this report. A message will appear to inform you of the location of the resulting file.

Exercise 3

Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool

A large, faint white wireframe globe is centered in the background of the slide.

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool



1. Start SPS Reporting Tool

The screenshot shows the Windows XP Start menu with the following path highlighted:

- Start
- All Programs
- BR Space Applications
- MSPACE
- SPS
- SPS Reports

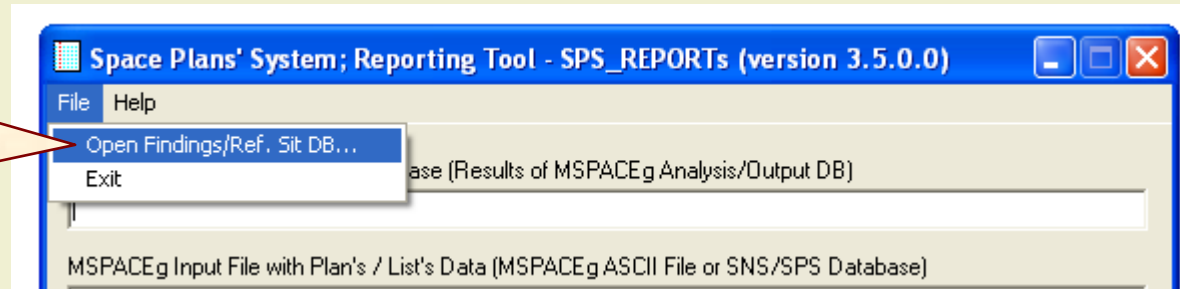
A callout box on the right side of the screen contains the text: "By clicking on its name or its icon on your desk top". The callout box points to the "SPS Reports" icon on the desktop and the "SPS Reports" menu item in the Start menu.

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)

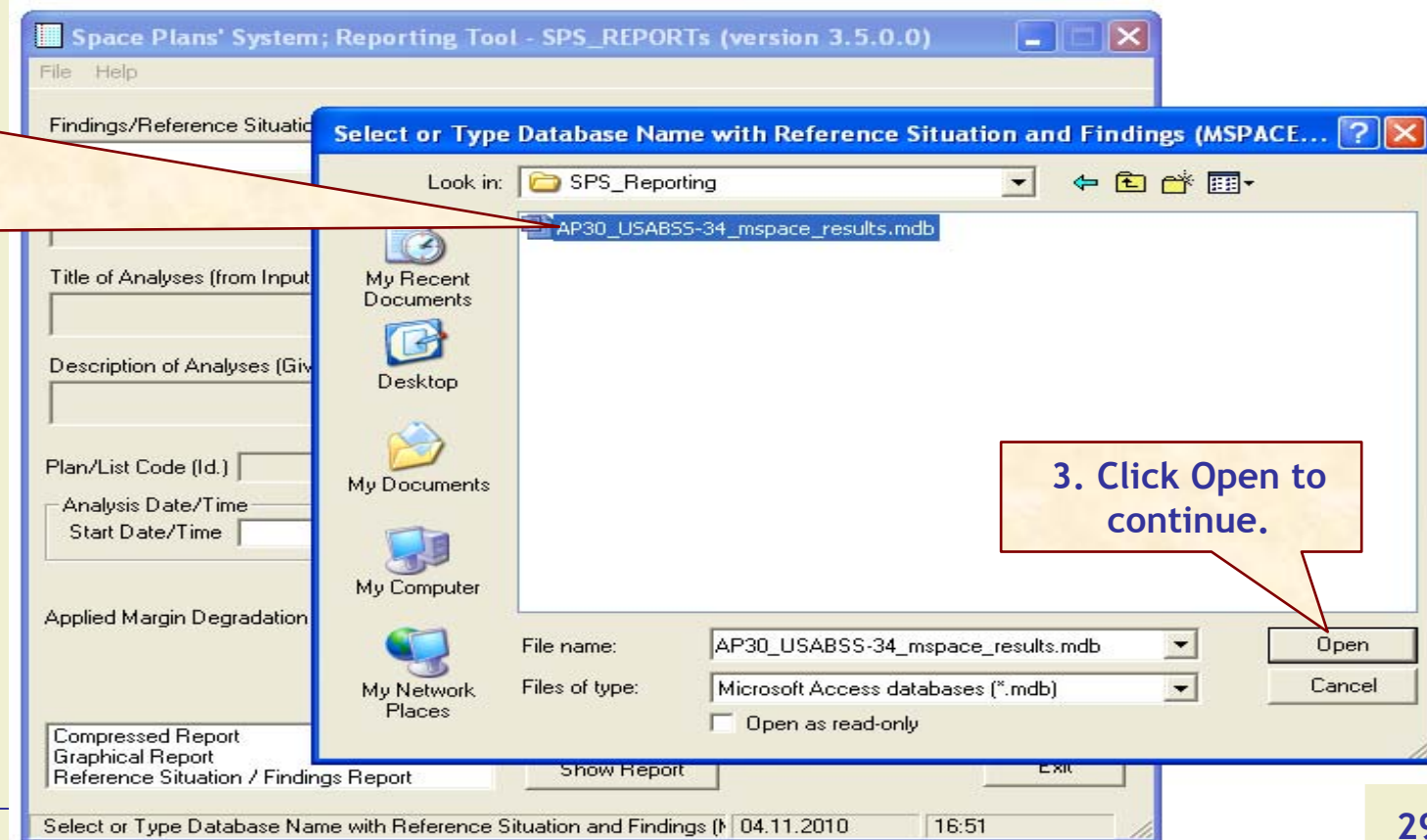


2. Select an Mspace results database (to be updated for R2)

1. Select Open Findings/Ref. Sit DB...



2. Select MSPACE results database containing the results of analysis for the R1&3 BSS network.



3. Click Open to continue.

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)



3. Select a version to analyze

Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.6.0.1)

File Help

Findings/Reference Situation Database (Results of MSPACEg Analysis/Output DB)
C:\WRS_2010\SPS_Reporting\AP30-30A_NSS-BSS 58w_mspace_results.mdb

MSPACEg Input File with Plan's / List's Data (MSPACEg ASCII File or SNS/SPS Database)

Select Plan/List which you want to analyse....

Please, choose a Plan, which you want to analyze from the list below (by clicking on the related row) and click on OK button

Analysis Version	Plan Id	Title in MSPACEg ASCII Input File	Analysis Description by the User
1	30_2		NSS-BSS 58w

OK Cancel

Graphical Report
Reference Situation / Findings Report

Show Report Exit

Select or Type Database Name with Reference Situation and Findings (N 23.11.2010 15:19

1. Select one version each time.
2. Click OK.

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)



4. Select a report (to be updated)

1. Select one report each time.
2. Click “Show Report”

The screenshot shows the 'Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.5.0.0) window. The interface includes a menu bar (File, Help), several text input fields for file paths and analysis details, and a list of report types at the bottom. The 'Compressed Report' option is selected in the list. A 'Show Report' button is visible next to the list. A status bar at the bottom displays the current date and time.

Space Plans' System; Reporting Tool - SPS_REPORTs (version 3.5.0.0)

File Help

Findings/Reference Situation Database (Results of MSPACEg Analysis/Output DB)
C:\WRS_2010\SPS_Reporting\AP30_USABSS-34_mspace_results.mdb

MSPACEg Input File with Plan's / List's Data (MSPACEg ASCII File or SNS/SPS Database)
C:\MG\PartA\USABSS-34\SPS_ALL_20100716_USABSS-34.mdb

Title of Analyses (from Input File)
[Empty field]

Description of Analyses (Given by the User)
USABSS-34

Plan/List Code (Id.) 00dn MSPACEg Version 6.6.0.1 Selected Analysis Version 1

Analysis Date/Time
Start Date/Time 28.07.2010 16:05:22 End Date/Time 28.07.2010 18:43:32

Applied Margin Degradation Limit (dB) 0.45

Compressed Report
Graphical Report
Reference Situation / Findings Report

Show Report Exit

Select or Type Database Name with Reference Situation and Findings (↑ 04.11.2010 17:06

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)



4.1 Compressed Report / Draft of Special Section

"Compressed" Report (Affected Beams/Channels)

File

Affected Beams and Channels(sorted by Orbital Position)

Orb.Pos.	Adm.	Beam Name	Affected Channels	OEPM Degrad.	Sat.Network Id.
-148.00	USA	USABS9E2	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32	0.420	USABSS-9
		USABS9O2	1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31	0.390	USABSS-9
-136.20	MEX	MEX02NTE	3,5,7,9,11,13,15,17,31	0.278	MEX02NTE
-135.80		MEX02NTE	2,4,6,8,10,12,14,16	0.301	MEX02NTE
-129.00	CAN	10017020	3	0.290	CAN-BSS7
		10017021			CAN-BSS7
-119.00	USA	10017225	2,4,6,12,14,16,18	0.274	USABSS-14
		10017229	11,13,15,17,19,21	0.282	USABSS-14
-110.00	USA	10017292	12,14,16,18,20	0.474	USABSS-15
		10017293		0.777	USABSS-15
		10017296	1,3,5,7,9,11,13,15,17,19	0.462	USABSS-15
		10017297		0.718	USABSS-15
-106.20	CHL	CHLCONT5	3,5,7,9,11,13,15,31	0.272	CHLCONT5
-101.20	USA	00007344	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32	0.418	USABSS-1R
		00007347		0.489	USABSS-1R
		00007350	1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31	0.416	USABSS-1R
		00007353		0.492	USABSS-1R
-92.30	JMC	CRBBLZ01	2	0.264	CRBBLZ01
-86.50	G	10010691	17,21,25,29	0.313	USAT-S3 MOD-C
		10010695		0.310	USAT-S3 MOD-C
	USA	10012848	1,5,9,13,17,21,25,29	0.421	USABSS-27

Data Presentation Options

Cells' Merging

Merge Cells

No Cell Merging

Rows' Sorting (also for print)

By Orbital Position

By Administration

Reproduce Report

Print Report

Create Draft of Special Section (in RTF format)

Show Output DB Structure

1. Select "Data Presentation Options"
2. Click "Reproduce Report"

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)



4.1 Compressed Report / Draft of Special Section (Cont.)

"Compressed" Report (Affected Beams/Channels)

File

Affected Beams and Channels(sorted by Orbital Position)

Orb.Pos.	Adm.	Beam Name	Affected Channels	OEPM Degrad.	Sat.Network Id.
-148.00	USA	USABS9E2	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32	0.420	USABSS-9
		USABS9O2	1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31	0.390	USABSS-9
-136.20	MEX	MEX02NTE	3,5,7,9,11,13,15,17,31	0.278	MEX02NTE
-135.80		MEX02NTE	2,4,6,8,10,12,14,16	0.301	MEX02NTE
-129.00	CAN	10017020	3	0.290	CAN-BSS7
		10017021			CAN-BSS7
-119.00	USA	10017225	2,4,6,12,14,16,18	0.274	USABSS-14
		10017229	11,13,15,17,19,21	0.282	USABSS-14
-110.00	USA	10017292	12,14,16,18,20	0.474	USABSS-15
		10017293		0.777	USABSS-15
		10017296		0.462	USABSS-15
		10017297		0.718	USABSS-15
-106.20	CHL	CHLCONT5	3,5,7,9,11,13,15,31	0.272	CHLCONT5
-101.20	USA	00007344	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32	0.418	USABSS-1R
		00007347		0.489	USABSS-1R
		00007350		0.416	USABSS-1R
		00007353		0.492	USABSS-1R
-92.30	JMC	CRBBLZ01	2	0.264	CRBBLZ01
-86.50	G	10010691	17,21,25,29	0.313	USAT-S3 MOD-C
		10010695		0.310	USAT-S3 MOD-C
		10012848		0.421	USABSS-27

Data Presentation Options

Cells' Merging

Merge Cells

No Cell Merging

Rows' Sorting (also for print)

By Orbital Position

By Administration

Reproduce Report

Print Report

Create Draft of Special Section (in RTF format)

Show Output DB Structure

Click here to produce print version of this report. A message will appear to inform you of the location of the resulting file.

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)



4.2 Graphical Report

Each row could contain multiple criteria.

1. Select criteria for the query.
2. Click "Run Query and Plot Map to view the report".

The screenshot shows the 'Graphical' Report tool interface. At the top, there is a 'File' menu. Below it, a section titled 'Find Test Points Belonging to Listed Administration Satellites, Beams, Channels' contains a sub-section 'Criteria Used for Graphical Report/Query (an empty box means any value)'. This section includes input fields for 'Administrations' (set to 'G'), 'Sat.Network Id' (set to 'USAT-S3 MOD-C'), 'Beam Names', and 'Channels'. To the right, an 'Available Values' panel lists 'G', 'USAT-S3 MOD-C', '10011968', and '1'. Below the map, there are buttons for 'Copy Map onto Clipboard' and 'Run Query and Plot Map'. A status bar at the bottom reads 'Done... You may prepare and run a new query.' A legend on the right side of the map includes 'Feeder Link Test Point', 'Down Link Test Point', 'Own Link Test Point', and 'Feeder Link Test Point'. A checkbox at the bottom right is labeled 'Plot Affected Test Points only'.

Select this option to display only affected test points.

Exercise 3 : Viewing results of MSPACE for a Region 2 network with SPS Reporting Tool (Cont.)



4.3 Reference Situation/Findings Report

Each row could contain multiple criteria.

Reference Situation / Calculated Margin Report (Query System)

Search Criteria
Criteria Used for Report/Query - empty box means any value

Administrations: G
 Longitude: -86.5
 Nominal degrees: -86.5
 Beam Names:
 Channels:
 Satellite: USAT-S3 MOD-C
 Network Id.(s): USAT-S3 MOD-C

Available Values
 G
 -86.5
 1
 USAT-S3 MOD-C

Legend
 Affected Test Point: -0.360, -0.985
 Affected Channel: 13

Select (or type) criteria from combo boxes on the right (click on wanted ones). Delete not required search criteria from the boxes above.

Output sorted by Administration, Longitude Nominal, Beam Name, Channel
 N/E - Non-Existing Reference Situation (Additions, Modifications, No Interference)

Retrieve Ref.Sit./Margin

Only Affected Channels to Be Shown

Test Points' Coordinates (Longitude, Latitude) degrees														
Adm.	Orb.Pos.	Beam Name	Ch.	TP 1 Ref.Sit Margin	TP 2 Ref.Sit Margin	TP 3 Ref.Sit Margin	TP 4 Ref.Sit Margin	TP 5 Ref.Sit Margin	TP 6 Ref.Sit Margin	TP 7 Ref.Sit Margin	TP 8 Ref.Sit Margin	TP 9 Ref.Sit Margin	TP 10 Ref.Sit Margin	TP 11 Ref.Sit Margin
G	-86.50	10010691	15	-6.384 -6.548	-6.762 -6.939	-5.523 -5.670	-6.141 -6.297	-6.333 -6.483	-8.061 -8.174	-7.954 -8.071	-7.437 -7.566	-10.431 -10.522		
		10010691	17	-3.497 -3.810	-4.504 -4.797	-3.592 -3.819	-4.515 -4.740	-4.929 -5.134	-6.622 -6.779	-6.945 -7.092	-6.460 -6.621	-9.861 -9.965		
		10010691	19	-6.619 -6.774	-6.978 -7.146	-5.725 -5.865	-6.347 -6.496	-6.559 -6.702	-8.254 -8.363	-8.174 -8.285	-7.659 -7.782	-10.702 -10.788		
		10010691	21	-3.530 -3.840	-4.530 -4.822	-3.611 -3.838	-4.537 -4.761	-4.950 -5.155	-6.639 -6.795	-6.965 -7.111	-6.472 -6.633	-9.829 -9.933		
		10010691	23	-6.628 -6.783	-6.988 -7.155	-5.730 -5.871	-6.356 -6.505	-6.567 -6.709	-8.263 -8.370	-8.189 -8.300	-7.644 -7.768	-10.629 -10.716		
		10010691	25	-3.534 -3.844	-4.532 -4.824	-3.607 -3.834	-4.539 -4.763	-4.951 -5.156	-6.658 -6.814	-6.971 -7.117	-6.450 -6.612	-9.770 -9.876		
		10010691	27	-6.628 -6.783	-6.988 -7.155	-5.728 -5.869	-6.357 -6.505	-6.570 -6.712	-8.275 -8.383	-8.186 -8.297	-7.648 -7.772	-10.674 -10.761		
		10010691	29	-3.533 -3.843	-4.531 -4.822	-3.606 -3.833	-4.539 -4.763	-4.958 -5.162	-6.642 -6.798	-6.969 -7.114	-6.451 -6.612	-9.833 -9.938		
		10010691	31	-6.627	-6.987	-5.729	-6.356	-6.571	-8.263	-8.187	-7.644	-10.620		

32 rows displayed. You may specify different criteria and run your next query if you wish

RTF Report Close

Reference Situation for the test point

Calculated Margin for the test point

Click here to retrieve Ref.Sit./Margin

Click here to produce print version of this report. A message will appear to inform you of the location of the resulting file.

Annex1: Where to get an install package of SPS



- Latest SPS install package could be downloaded from the ITU website at:

<http://www.itu.int/en/ITU-R/space/plans/Pages/AP30-30A.aspx>

Home > ITU-R > Space Services > Space Plans

Search:

Appendices 30 & 30A BSS Plan

Space Plans

- What's New
- Frequently Asked Questions
- Appendices 30 & 30A BSS Plan
- AP30B Plan
- Master Register
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- Resolution 547
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Appendices 30 & 30A BSS Plan (including associated MSPACEg software)

Various World Radiocommunication Conferences have revised Appendices **30** and **30A** to the Radio Regulations. In accordance with Resolution **546** (WRC-03), the revised Appendices **30** and **30A** entered into force on 5 July 2003 with the exception of the footnotes to § 4.1.15, 4.1.15, 4.2.8 and 4.2.8 and the revised Annexes. Those footnotes entered into force on 1 August 2003 and the revised Annexes entered into force on 1 January 2004.

In accordance with *resolves* 2 of Resolution **533** (Rev.WRC-2000) and *resolves* 1 of Resolution **546** (WRC-03), the Bureau is using the revised Appendix **30** and **30A** as adopted at WRC-03 in its examination of submissions received as from 3 June 2000.

The Bureau is currently examining the regulatory and technical aspects of these submissions. It is also publishing Special Sections, that contain the full satellite network characteristics and coordination requirements.

The latest reference situations resulting from this review are contained in the zipped SPS Version 6.1 database below.

Space Plans Systems (SPS) Version 6.1 Database	Size	Updated
SPS_ALL_IFIC2680	18.3 MB	19.10.10

NOTE 1 - The technical characteristics and reference situation (EPM) for the Appendix 30/30A Plans & Lists and for pending Article 4 networks are provided in the Space Plans Systems (SPS) Version 6.1 database (MS Access 2000 format). In order to properly view the SPS database, [SpaceCap](#) (v6 or later) or [SpacePub](#) (v6 or later) software is required. SPS (v6 or later) is required to perform an MSPACE analysis on the networks contained in this database. Note that this database does not yet contain data for Appendix 30B networks (The Appendix 30B database is [here](#)).

NOTE 2 - Reference EPM values provided in the Regions 1 & 3 Plan and List files were calculated taking into account the maximum orbital separation and List assignments and a 9° orbital separation limit. The user should set the MSPACEg options accordingly.

NOTE 3 - The following software needs to be installed to perform an analysis on the various networks:

- o [SPS version 6.6.0.1 for Appendices 30 & 30A](#) [8.19 MB] Updated 17.11.2009 (to install, download unzip and run **SPS 6.6.0.1 Setup.exe**).
- o [GIBC v8.0.0.12 or later](#). Available from the [SRS-on-DVD](#) or BR IFIC
- o [GIMS v7.0 or later](#). Available from the [SRS-on-DVD](#) or BR IFIC
- o [GIMS Database](#). Available from the [SRS-on-DVD](#) (incremental updates are on the BR IFIC)

Click here to download SPS install package. SPS Reporting Tool is part of the SPS.

Annex1: Where to get an install package of SPS (Cont.)

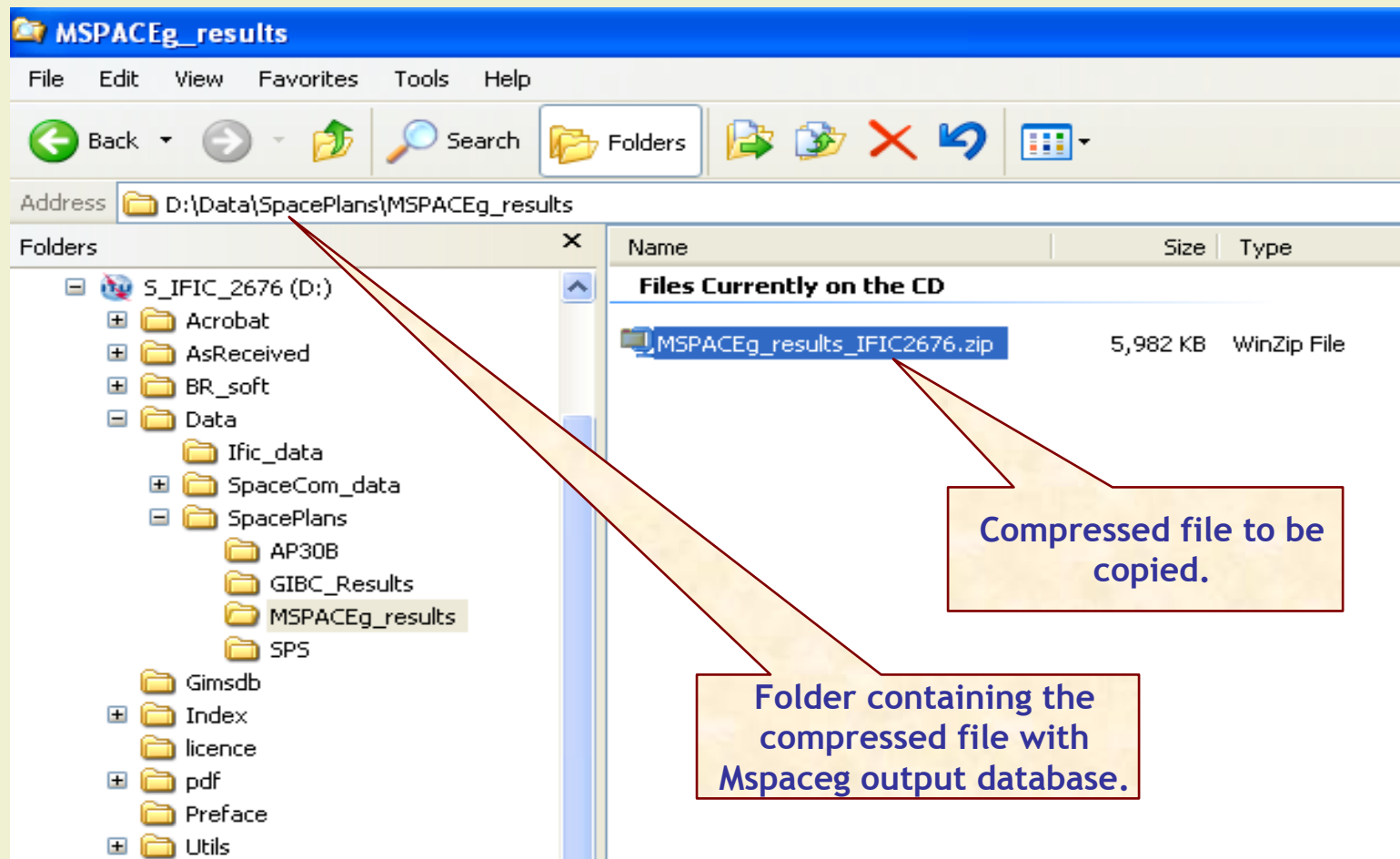


- SPS install package could also be obtained from BR IFICs (Space Services) from the following directory.

`\BR_soft\SPS\`

Name	Size	Type	Date Modified	Location
Readme.txt	6 KB	Text Document	05.11.2009 14:22	Files Currently on the CD
SPS 6.6.0.1 Setup.exe	8,589 KB	Application	05.11.2009 14:22	Files Currently on the CD

Annex2: Get Mspace results available in BR IFICs

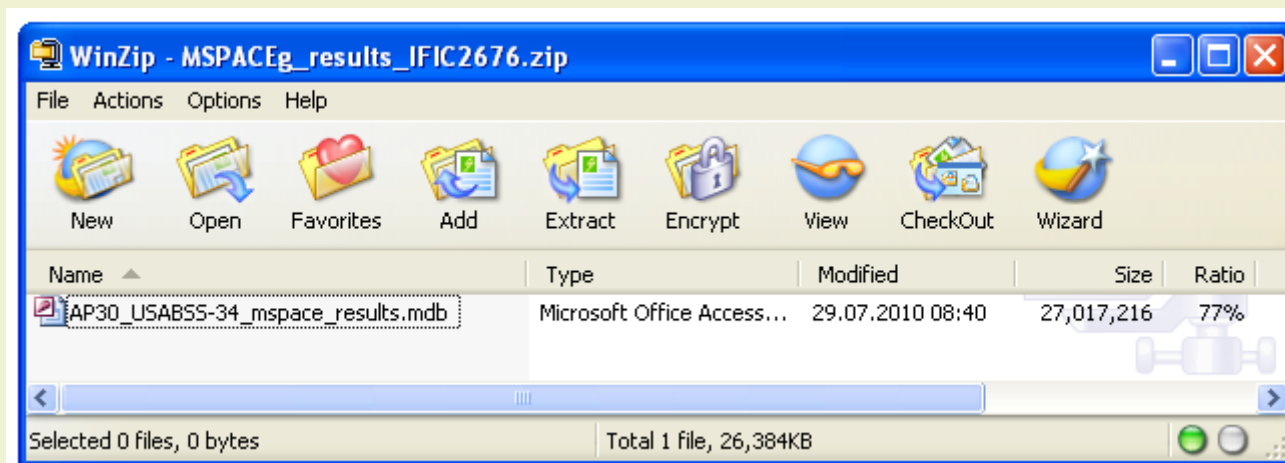


Copy the compressed file with Mspaceg output databases containing analysis results from the BRIFIC to the user's computer.

Annex2: Get Mspace results available in BR IFICs for SPS Reporting Tool (Cont.)



Unpack the compressed file to get the Mspaceg output database(s)



The analysis results of the USABSS-34 network (downlink part) are stored in the file having name, which combines:

- ✓ a prefix - AP30 for R1&3 BSS; AP30A for R1&3 BSS Feeder-link and AP30_30A for R2 BSS/Feeder-link;
- ✓ a given network name (USABSS-34);
- ✓ suffix - mspaceg_results;
- ✓ dot (.);
- ✓ extension - MDB.