

ITUEvents

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[www.itu.int/go/ITU-R/WRS-18](http://www.itu.int/go/ITU-R/WRS-18)



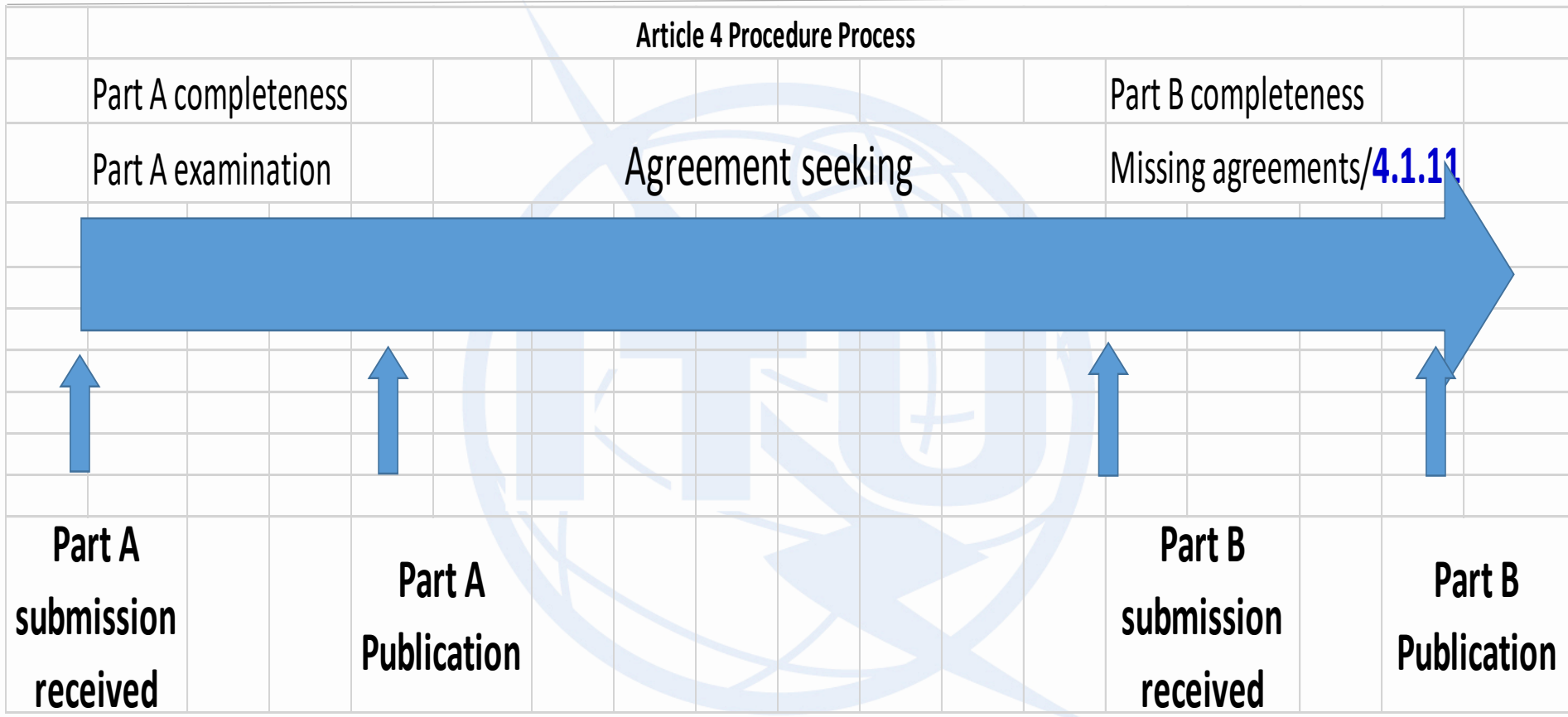
## **AP30/30A Part-B submissions**

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6 December, 2018

# Article 4 Process

Article 4 Procedure Process



# **AP30/30A Part B submissions**

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- 1. Creation of draft Part B submission**
- 2. Validation of Part B submission**
- 3. Verification of Hard Limits**
- 4. Modifications within envelope of Part A**
- 5. Any missing agreements under 4.1.1 (Regions 1&3) or 4.2.3/4.2.2 (Region 2)**
- 6. Request for Provisional Entry**

# 1. Creation of draft Part B submission (1)

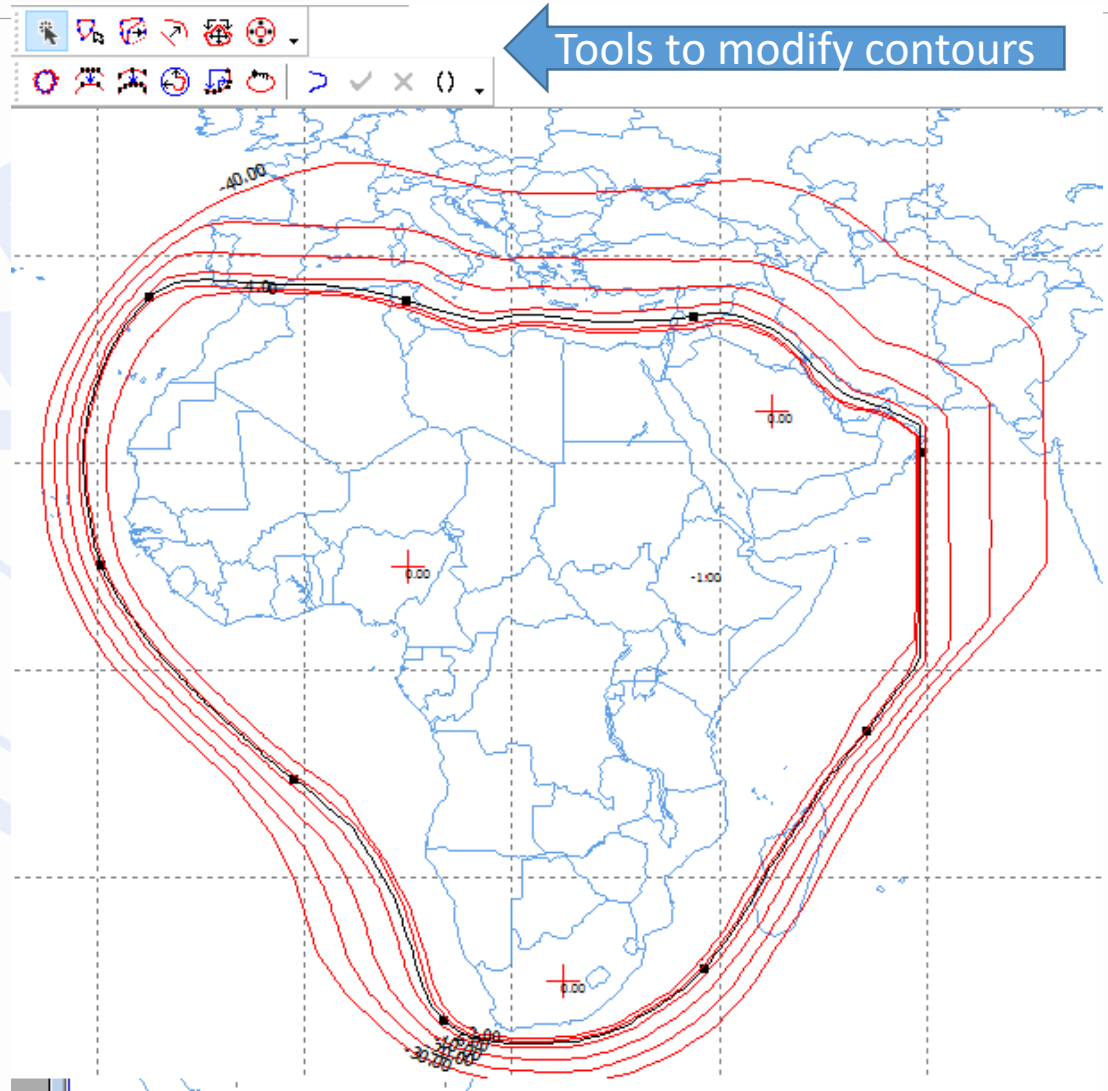
- You should prepare your Part B by using your Part A as published by the BR in BR IFICXXXX (Space services – XXXX indicate the number of BR IFIC).
- By using SpaceCap and GIMS you can extract Part A into a single notice database (SpaceCap database) and GIMS data from the SPS\_ALL and grefdb. SPS\_ALL\_IFICXXXX and grefdbXXXX containing the Part A are stored at:

Name	Date modified	Type	Size
anim3d	05.11.2018 8:46 AM	File folder	
BR_Soft	19.05.2017 10:44 AM	Text Document	1 KB
Databases	24.11.2016 10:07 AM	Adobe Acrobat D...	69 KB
AP30_30A	24.11.2016 10:07 AM	Adobe Acrobat D...	52 KB
TEX_Results	24.11.2016 10:07 AM	Adobe Acrobat D...	32 KB
AP30B	24.11.2016 10:07 AM	Adobe Acrobat D...	39 KB
EPFD	24.11.2016 10:07 AM	Adobe Acrobat D...	41 KB
GIMS_Data	24.11.2016 10:08 AM	Adobe Acrobat D...	39 KB
IFIC_Archive	20.10.2018 12:20 PM	Microsoft Access ...	411,156 KB
IFIC_Data			
SpaceCom			
SRS_Data			

Name	Date modified	Type	Size
anim3d	22.12.2011 2:00 PM	Adobe Acrobat D...	63 KB
BR_Soft	22.12.2011 2:00 PM	Adobe Acrobat D...	73 KB
Databases	22.12.2011 2:00 PM	Adobe Acrobat D...	27 KB
AP30_30A	22.12.2011 2:00 PM	Adobe Acrobat D...	33 KB
TEX_Results	22.12.2011 2:00 PM	Adobe Acrobat D...	38 KB
AP30B	22.12.2011 2:00 PM	Adobe Acrobat D...	33 KB
EPFD	19.10.2018 7:48 AM	Microsoft Access ...	1,197,408 KB
GIMS_Data			
IFIC_Archive			
IFIC_Data			
SpaceCom			
SRS_Data			

# 1. Creation of draft Part B submission (2)

**With regard to antenna gain contours, you should introduce the modification directly on the GIMS data instead of exporting them into GXT files.**



# 1. Creation of draft Part B submission (3)

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## Items to be taken into account:

- **More test-points (up to 100) for large service areas.**
- **Evenly distributed test-points across service areas.**
- **Coverage area should be aligned with associated service area.**
- **One power level per assignment.**
- **Number of earth stations should be limited to a maximum of 3.**
- **Number of networks in the List with overlapping frequency per grouping (Res. 548) in Regions 1 and 3: 3 to 5**
- **No duplicated assignments**
- **Part B is within envelope of Part A.**

## **2. Validation of Part B submission**

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**Once you finish creation of draft Part B including GIMS data, please validate them with **SpaceVal** before continuing with the next process.**

**You should also use **SpaceVal** to validate any change after creation of draft Part B submission.**

# 3. Verification of Hard Limits (1)

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**Regions 1 and 3 Part B shall be compliant with the applicable Hard limits specified in Annex 1 of Appendix 30/30A. Use GIBC/AP30 30A to check.**

**Preparation of input Database and GIMS data to check compliance with the Hard Limits:**

- **From the latest BR IFIC, get the SPS\_ALL\_IFICXXXX database and GIMSREFDBXXXX.**
- **Use SpaceCap to export your Part B into the above SPS\_ALL database (both downlink and feeder-link).**

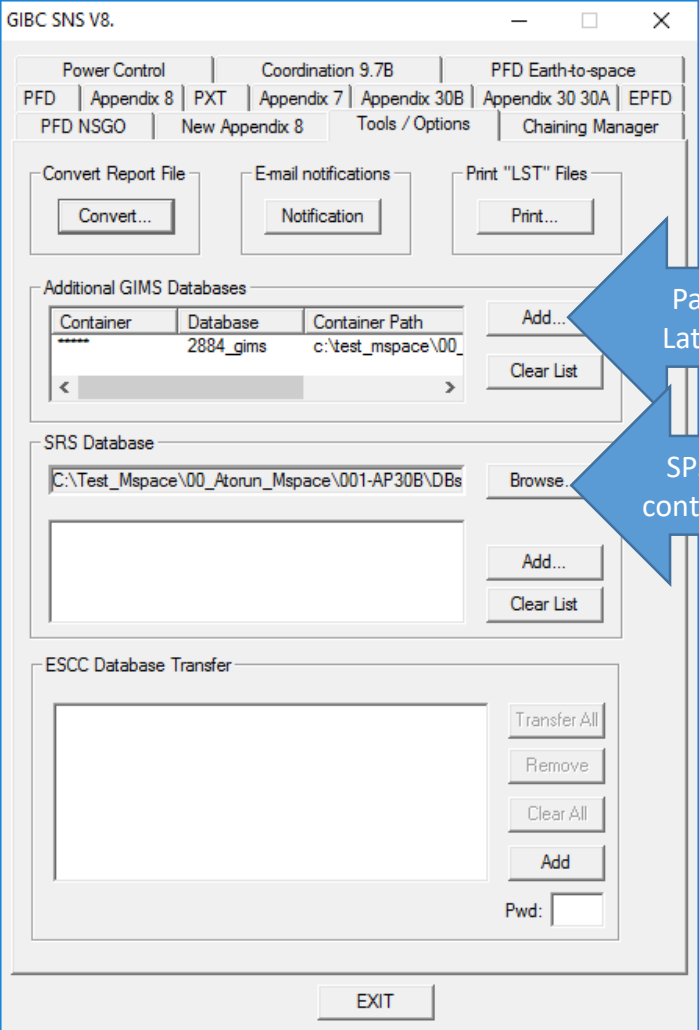
**NOTE: This Hard Limits check is required only for submissions in Regions 1 and 3.**

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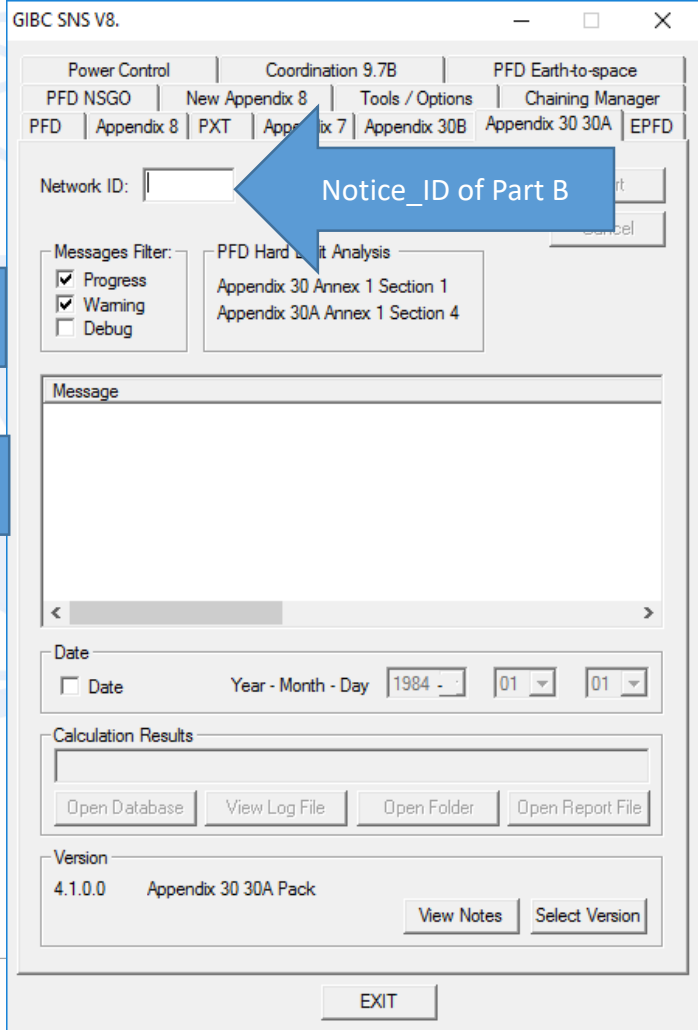
# 3. Verification of Hard Limits (2)

➤ Run GIBC/Appendix 30 30A twice; one for Downlink and another for Feeder-link



Part B GIMS data Latest GIMSREFDB

SPS\_ALL\_IFICXXX containing your Part B



## 4. Modifications within envelope of Part A (1)

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1. Modifications as a consequence of seeking agreement (**for all Regions**)
2. Interference under 4.1.11: Not Increasing **and** Not Affecting interference to networks/services of other Administrations (**only for Regions 1 and 3**)

## **4. Modifications within envelope of Part A (2)**

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**The following modifications would not be considered as a consequence of seeking agreement:**

- ✓ **Add new beams; new service areas; new frequency assignments**
- ✓ **Expand coverage and/or service areas**
- ✓ **Overlap coverage and/or service areas**
- ✓ **Increase number of assignments (e.g. Increase number of polarizations)**
- ✓ **etc.**

**(Note: This list is not exhaustive!)**

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## 4. Modifications within envelope of Part A (3)

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**Checking increase of interference: The following databases are required.**

- **On the latest BR IFIC:**
  - ✓ ***SPS\_ALL\_IFICXXXX***
  - ✓ ***GIMSREFXXXX***
  - ✓ ***SRSXXXX***
- **SpaceCap database and GIMS data of your Part B submission**
- **If your network is grouped with assignments in the Plan/List, you need to delete those assignments and update the reference situation of the **SPS\_ALL\_XXXX** before continuing.**

## 4. Modifications within envelope of Part A (4)

- **Checking increase of interference to other assignments in the same Plan with Mspace (only for submissions in Regions 1 and 3)**
  - **Run 1: Run Mspace using the Part A parameters:**
    - *Set the field “ntf\_occurs” in the Notice table from “V” to “A” for your Part A notices in the SPS\_ALL\_XXXX database*
    - *Run Mspace twice; one for downlink and another for feeder-link*
      - **SPS\_ALL\_IFICXXXX with V changed to A as input of Mspace**
      - **GIMSREFXXXX as GIMS data**
  - **Run 2: Run Mspace using the Part B parameters:**
    - *Replace Part A with Part B in the SPS\_ALL\_XXXX database (make sure the field “ntf\_occurs” in the Notice table is set to “A” for your Part B notices)*
    - *Run Mspace twice; one for downlink and another for feeder-link*
      - **SPS\_ALL\_IFICXXXX containing Part B as input of Mspace**
      - **GIMSREFXXXX as GIMS data**
      - **GIMS Data of your Part B submission**
  - **Compare the Mspace results in Run 1 and Run 2 to identify any networks which are affected and receive more interference from Part B than from Part A. If any, you need to eliminate them or to obtain an agreement.**

# 4. Modifications within envelope of Part A (5)

## Run Mspace

SPS version 8.0.0.9. WRC-2000 Regions 1 and 3 BSS Plan/List

File Query Options Help

**Input/Output** Run-time Information Compressed Report Graphical Report

Input File Name  
Input SPS Database with Plan/List Data C:\Test\_Mspace\00\_Atorun\_Mspace\SPS\_ALL\_IFIC2880.mdb

Output File Names  
Findings Text File C:\Test\_Mspace\00\_Atorun\_Mspace\SPS\_ALL\_IFIC2880.fnd  
Output Database with Findings/Ref.Sit. C:\Test\_Mspace\00\_Atorun\_Mspace\SPS\_ALL\_IFIC2880.OUT.MDB

Level of Detail for Output Report  
 Level 0 - Minimum Details  Level 1  
 Level 2  Level 3 (HUGE Report for One Beam only)

Study One Beam?  
 Analyse Complete Plan (all beams)  
 Analyse One Beam

Options Related to Application of Orbital Separation Limit  
 Apply Orbital Separation Limit  
Co-polar Orbital Limit (degrees) 9.0  
Cross-polar Orbital Limit (degrees) 9.0

Applied Margin Degradation Limit (dB) 0.45

Add GIMS Database(s)

DB Name	DB Path
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Start Analysis

Select Database Name for Storing Findings and Reference Situation 08.11.2018 4:44 PM

1. Connect to SPS\_ALL\_IFICXXXX containing Part A or Part B

2. Connect to additional GIMS data

3. Press Start

# 4. Modifications within envelope of Part A (6)

## ➤ Compare the Mspace results in Run 1 and Run 2:

Mspace output with Part A (Run1)

Mspace output with Part B (Run 2)

Vrs_No	Beam_No	Chan_No	Emi_Rcp	TP_No	Margin	Ref_Sit
1	1	1	1 E	1	-24.1735	-24.174
1	1	1	1 E	2	-19.6567	-19.657
1	1	1	1 E	3	-16.2449	-16.245
1	1	1	1 E	4	-16.1609	-16.161
1	1	1	1 E	5	-23.1314	-23.131
1	1	1	1 E	6	-16.1245	-16.125
1	1	1	1 E	7	-16.084	-16.084
1	1	1	1 E	8	-15.7899	-15.79
1	1	1	1 E	9	-16.5877	-16.588
1	1	1	1 E	10	-22.0197	-22.02
1	1	1	1 E	11	-15.6801	-15.68
1	1	1	1 E	12	-18.0004	-18
1	1	1	1 E	13	-15.9666	-15.967
1	1	1	1 E	14	-17.564	-17.564
1	1	1	1 E	15	-17.4735	-17.474
1	1	1	1 E	16	-18.5757	-18.576
1	1	1	1 E	17	-16.6662	-16.666
1	1	1	1 E	18	-23.6331	-23.633
1	1	1	1 E	19	-17.4946	-17.495
1	1	1	5 E	1	-24.478	-24.478
1	1	1	5 E	2	-20.0129	-20.013

Vrs_No	Beam_No	Chan_No	Emi_Rcp	TP_No	Margin	Ref_Sit
1	1	1	1 E	1	-24.1735	-24.174
1	1	1	1 E	2	-19.6567	-19.657
1	1	1	1 E	3	-16.2449	-16.245
1	1	1	1 E	4	-16.1609	-16.161
1	1	1	1 E	5	-23.1314	-23.131
1	1	1	1 E	6	-16.1245	-16.125
1	1	1	1 E	7	-16.084	-16.084
1	1	1	1 E	8	-15.7899	-15.79
1	1	1	1 E	9	-16.5877	-16.588
1	1	1	1 E	10	-22.0197	-22.02
1	1	1	1 E	11	-15.6801	-15.68
1	1	1	1 E	12	-18.0004	-18
1	1	1	1 E	13	-15.9666	-15.967
1	1	1	1 E	14	-17.564	-17.564
1	1	1	1 E	15	-17.4735	-17.474
1	1	1	1 E	16	-18.5757	-18.576
1	1	1	1 E	17	-16.6662	-16.666
1	1	1	1 E	18	-23.6331	-23.633
1	1	1	1 E	19	-17.4946	-17.495
1	1	1	5 E	1	-24.478	-24.478
1	1	1	5 E	2	-20.0129	-20.013

Compare relevant records in the REF\_SITs table. Margin (Run 2) >= Margin (Run 1).

## 4. Modifications within envelope of Part A (7)

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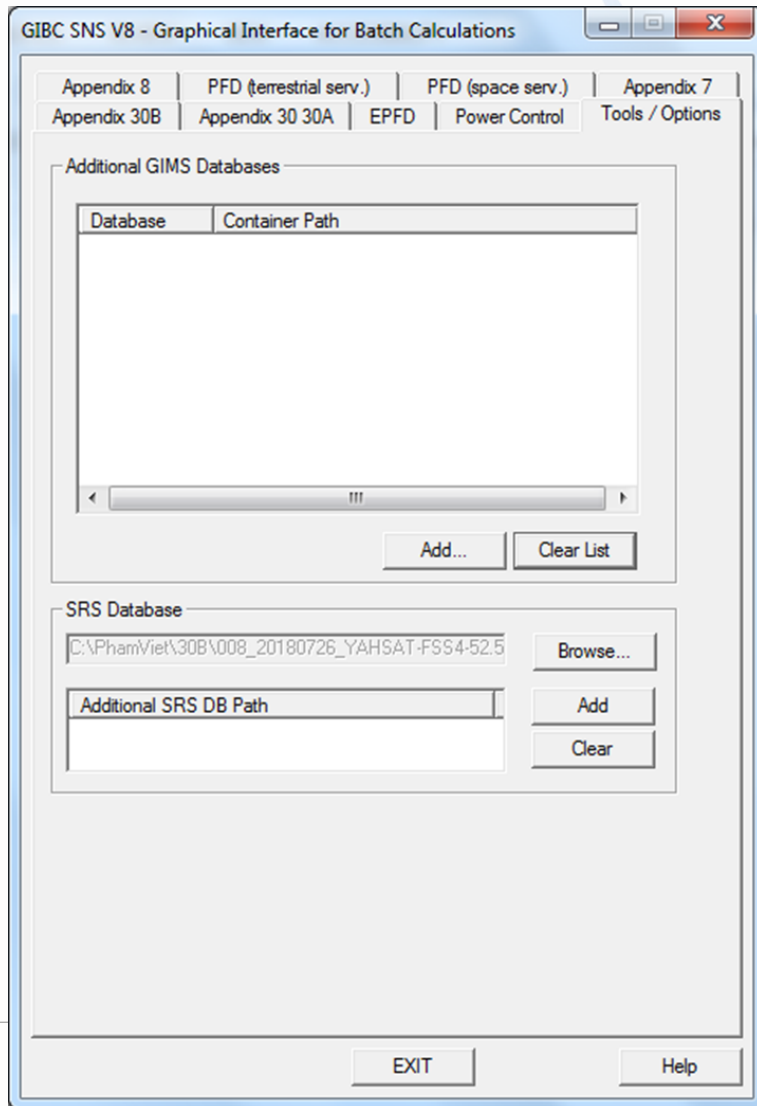
**Checking increase of interference to assignments in unplanned bands with GIBC/PFD and GIBC/PXT (only for submissions in Regions 1 and 3):**

- **Change the Notice\_ID of your Part B downlink submission to 199999999 both in SpaceCap database and GIMS data.**
- **Export your Part B downlink submission into SPS\_ALL\_IFICXXX database (Part A still remains in this SPS\_ALL database)**
- **Run GIBC/PFD and GIBC/PXT with option “Appendix 30 Art.4.1.11” selected and enter Notice\_ID of your corresponding Part A**
- **Check the GIBC output results to see if there are any identifications. If any, you need to eliminate them or to obtain an agreement.**



# 4. Modifications within envelope of Part A (8)

## ➤ Run GIBC/PFD (terrestrial serv.), GIBC/PXT (space serv.) (1)



← Your Part B GIMS data  
Latest GIMSREFDB

← SPS\_ALL\_IFICXXX including your Part B

← SRSXXX

# 4. Modifications within envelope of Part A (9)

## ➤ GIBC/PFD (terrestrial serv.) (2)

Note: This functionality will be available in GIBC packaged on BR IFIC 2885.

The screenshot shows the GIBC SNS V8.0 software interface. At the top, there are tabs for Power Control, Coordination 9.7B, PFD Earth-to-space, PFD NSGO, New Appendix 8, Tools / Options, Chaining Manager, and PFD. Below the tabs, there are buttons for Appendix 8, PXT, Appendix 7, Appendix 30B, Appendix 30 30A, and EPFD. The main area contains several sections: Operator ID (phamviet), Network ID (empty), Examination Data (Examination: Triggers, Power Control (dBW): 0, Output Level: Level 1), "Before" Examination (checkboxes for Perform "Before" Comparisons and Appendix 30 Art.4.1.11, Previous Networks: empty), Files Path (C:\BR\_TEX\_RESULTS\), and a version box (8.3.0.0 Part of TEX 8.10.0.0). An EXIT button is at the bottom.

1. Enter 199999999

2. Select "Triggers"

3. Select "Appendix 30 Art.4.1.11" and enter Notice\_ID of your Part A downlink

# 4. Modifications within envelope of Part A (10)

## GIBC/PFD (Space serv.) (3)

Note: This functionality will be available in GIBC packaged on BR IFIC 2885.

The screenshot shows the GIBC SNS V8 software interface. At the top, there are tabs for 'Power Control', 'Coordination 9.7B', and 'PFD Earth-to-space'. Below these are sub-tabs for 'PFD NSGO', 'New Appendix 8', 'Tools / Options', and 'Chaining Manager'. A row of buttons includes 'PFD', 'Appendix 8', 'PXT', 'Appendix 7', 'Appendix 30B', 'Appendix 30 30A', and 'EPFD'. The 'Operator ID' field contains 'phamviet'. There are 'Schedule' and 'Start' buttons. The 'Network ID' field is empty. A blue arrow points to this field with the text '1. Enter 199999999'. The 'Examination Data' section has a 'Resolution 547' checkbox, 'Power Control (dBW): 0', 'Output Level: Level 1', and 'Findings Level: Group'. The 'Existing' section has a 'Check Against Existing' checkbox, 'Administration ID', 'Transaction ID', and 'Sat. Network Symbol' fields. The '"Before" Examination' section has 'Perform "Before" Comparisons' and 'Appendix 30 Art.4.1.11' checkboxes, and a 'Previous Networks' grid. The 'Files Path' section shows 'C:\BR\_TEX\_RESULTS\' and an 'Open Folder' button. At the bottom, it says '8.6.0.1 Part of TEX 8.10.0.0' and an 'EXIT' button. A large blue arrow points from the right towards the 'Appendix 30 Art.4.1.11' checkbox with the text '2. Select "Appendix 30 Art.4.1.11" and enter Notice\_ID of your Part A downlink'.

## 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (1)

**You have to go back to your Part A scenario to check if any agreement is still required under:**

Using Mspace	
Regions 1 & 3	Region 2
<ul style="list-style-type: none"><li>➤ AP30 4.1.1 a), b)</li><li>➤ AP30A 4.1.1 a), b)</li></ul>	<ul style="list-style-type: none"><li>➤ AP30 4.2.3 c)</li><li>➤ AP30A 4.2.2 c)</li></ul>

## 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (2) - MSPACE

From the BR IFIC **XXXX** corresponding to the Part A publication, get the following databases:

- **SPS\_ALL\_IFICXXXX**
- **GIMSREFXXXX**

Replace Part A with Part B in the **SPS\_ALL\_XXXX** database (make sure the field “ntf\_occurs” in the Notice table is set to “A” for your Part B notices)

Run Mspace twice (one for downlink and another for feeder-link) in case of Regions 1 and 3 and once in case of Region 2 with:

- **SPS\_ALL\_IFICXXXX** containing Part B as input of Mspace
- **GIMSREFXXXX** as GIMS Reference data
- **GIMS Data of your Part B submission**

If your network is grouped with assignments in the Plan/List, you need to delete those assignments and update the reference situation of the **SPS\_ALL\_XXXX** before continuing.

## 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (3)

You can use the latest **SPS\_ALL**, **SRS** and **GIMSREFDB** databases to check if any agreement is still required under:

Using GIBC	
Regions 1 & 3	Region 2
<ul style="list-style-type: none"><li>➤ AP30 4.1.1 c), d), e)</li><li>➤ AP30A 4.1.1 c), d)</li></ul>	<ul style="list-style-type: none"><li>➤ AP30 4.2.3 a), b), d), e), f)</li><li>➤ AP30A 4.2.2 a), b)</li></ul>

## **5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (4)**

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### **Use GIBC/PFD (terrestrial):**

#### **For Regions 1 and 3:**

- ***AP30 4.1.1 d)***

#### **For Region 2:**

- ***AP30 4.2.3 d)***

## **5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (5)**

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**Use GIBC/PFD (space):**

**For Regions 1 and 3:**

- ***AP30 4.1.1 c), e)***

**For Region 2:**

- ***AP30 4.2.3 a), b), e), f)***



## **5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (6)**

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### **Use GIBC/Appendix 8:**

#### **For Regions 1 and 3:**

- ***AP30A 4.1.1 c), d)***

#### **For Region 2:**

- ***AP30 4.2.3 e)***
- ***AP30A 4.2.2 a), b)***

## 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (7)

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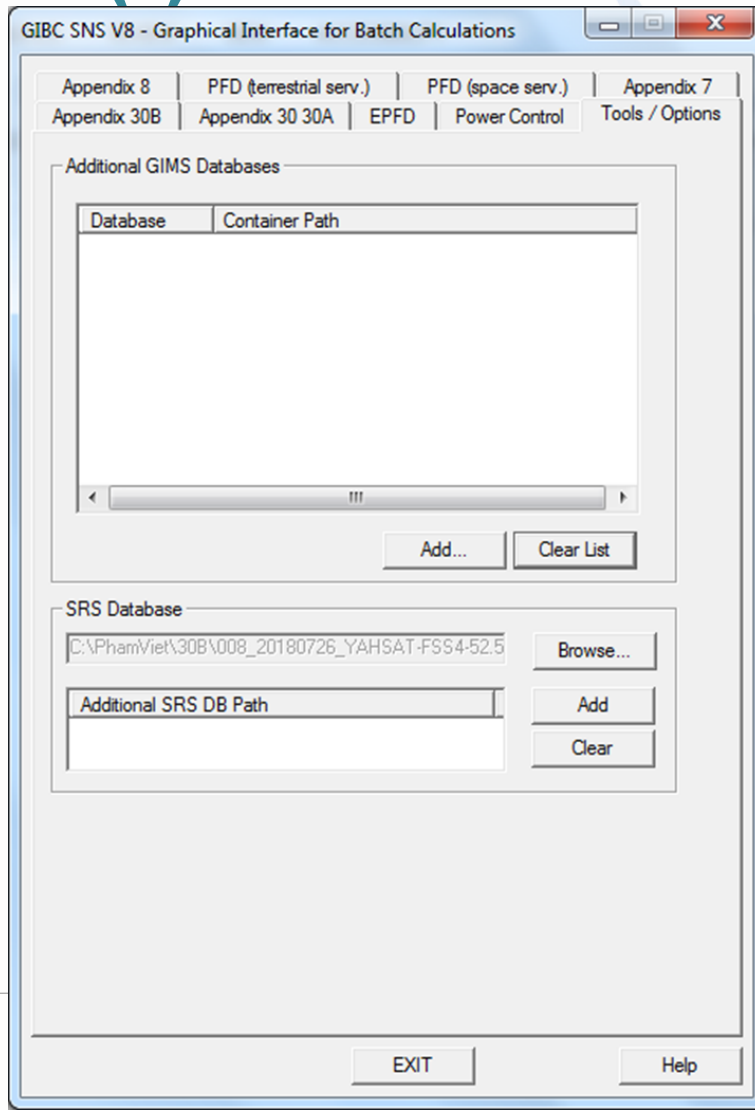
### Databases and GIMS data for GIBC

- On the latest BR IFIC get the following:
  - ✓ **SPS\_ALL\_IFICXXXX**
  - ✓ **GIMSREFXXXX**
  - ✓ **SRSXXXX**
- Set the date of protection of your Part B to the date of protection of your Part A (i.e. the same as date of receipt of your Part A)

Replace Part A with Part B in the **SPS\_ALL\_XXXX** database.

# 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (8)

## Run GIBC/PFD(terrestrial), GIBC/PFD(space), GIBC/Appendix 8 (1)



Your Part B GIMS data  
Latest GIMSREFDB

SPS\_ALL\_IFICXXX including your Part B

SRSXXX

# 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (9)

## ➤ GIBC/PFD(Terrestrial) (2)

GIBC SNS V8.0

Power Control | Coordination 9.7B | PFD Earth-to-space  
PFD NSGO | New Appendix 8 | Tools / Options | Chaining Manager  
PFD | Appendix 8 | PXT | Appendix 7 | Appendix 30B | Appendix 30 30A | EPFD

Operator ID: phamviet [Schedule] [Start]

Network ID: [ ]

Examination Data  
Examination: Triggers [ ]

Power Control (dBW): 0 [ ] Output Level: Level 1 [ ]

"Before" Examination  
 Perform "Before" Comparisons  
 Appendix 30 Art.4.1.11  
Previous Networks: [ ] [ ] [ ]  
[ ] [ ]

Files Path  
C:\BR\_TEX\_RESULTS\  
[Open Folder]

8.3.0.0 Part of TEX 8.10.0.0

[EXIT]

# 5. Any missing agreements under 4.1.1 (R1&3) or 4.2.3/4.2.2 (R2) (10)

## ➤ GIBC/PFD(space) (3)

GIBC SNS V8.

Power Control | Coordination 9.7B | PFD Earth-to-space  
PFD NSGO | New Appendix 8 | Tools / Options | Chaining Manager  
PFD | Appendix 8 | PXT | Appendix 7 | Appendix 30B | Appendix 30 30A | EPFD

Operator ID: phamviet    Schedule    Start

Network ID:

Examination Data

Resolution 547    Output Level: Level 1  
Power Control (dBW): 0    Findings Level: Group

Existing

Check Against Existing    Administration ID:   
Transaction ID:     Sat. Network Symbol:

"Before" Examination

Perform "Before" Comparisons     Appendix 30 Art.4.1.11

Previous Networks:

Files Path  
C:\BR\_TEX\_RESULTS\  
Open Folder

8.6.0.1    Part of TEX 8.10.0.0

EXIT

# 4. Part B within envelope of Part A (11)

## ➤ GIBC/Appendix 8 (4)

GIBC SNS V8 - Graphical Interface for Batch Calculations

Appendix 30B | Appendix 30 30A | EPFD | Power Control | Tools / Options  
Appendix 8 | PFD (terrestrial serv.) | PFD (space serv.) | Appendix 7

Start

Network:

1. Enter Notice\_ID of your Part B

Examination Data

Ap8 Case I/II:  Findings Level:   
 Use Polarization Output Level:

Existing

Check Against Existing Administration ID:   
Transaction ID:  Sat. Network Symbol:

Date

Date Year - Month - Day  -  -

Files Path

C:\BR\_TEX\_RESULTS\AP8\

Open Folder

EXIT Help

# 6. Request for Provisional Entry

- **In case of continuing disagreement, notifying Administration can apply 4.1.18 (Regions 1 and 3) or 4.2.21A (Region 2) to have its assignments provisionally entered into the List (Regions 1 and 3) or Plan (Region 2), as appropriate.**
- **Conditions:**
  - **4.1.16 (Regions 1 and 3) or 4.2.20 (Region 2) duly applied**
  - **In case of Regions 1 and 3, affected assignments shall not be:**
    - ✓ *An assignment in Regions 1 and 3 Plan, or in the Region 2 Plan*
    - ✓ *Or pending Region 2 Article 4 networks*
  - **In case of Region 2, affected assignments shall not be:**
    - ✓ *An assignment in Region 2 Plan, or in Regions 1 and 3 Plan or List*
    - ✓ *Or pending Region 2 Article 4 networks*
    - ✓ *Or pending Regions 1 and 3 Article 4 networks*
  - **The notifying Administration insists that the proposed assignment should be included in the Regions 1 and 3 List or Region 2 Plan**
  - **Notifying Administration shall provide to each remaining affected Administration, copy to the Bureau, a description of the steps to immediately eliminate harmful interference. Such steps could be reduction of power, termination of transmission, etc.**



**Thank you**





# Updating Reference situation with BSS\_Marg

Space Plans System; Update Reference Situation Utility (BSS Plans/Lists) - BSS\_Marg (v 8.0.0.9)

File Help

MSPACEg\_output database containing examination results

Select analysis version

Version	Plan Id.	Comments	Input File Name	MSPACEg Title	Analysis Description

Database where the reference situation will be updated (SPS format)

BSS\_Margin program's messages

Select database name with MSPACEg output results.

Update Reference Situation for ...

All beams (all types of assignment) and replace "A" by "P" (Plan)

Additions only (type of assignment "A") and replace "A" by "V" (Victim)

Do not update Reference Situation

Store in SNS/SPS:

List of affected administrations and analysis results

Analysis version used for update:

Number of beams to be treated:

Start Update

13.11.2018 12:18 PM

1. Your Mspace output database

2. Plan to be updated

3. SPS\_ALL database to be updated

4. Select the first option