



## Coordination Request

Capture exercise, Validation, and Correction

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ITUEvents

# ITU World Radiocommunication Seminar 2018

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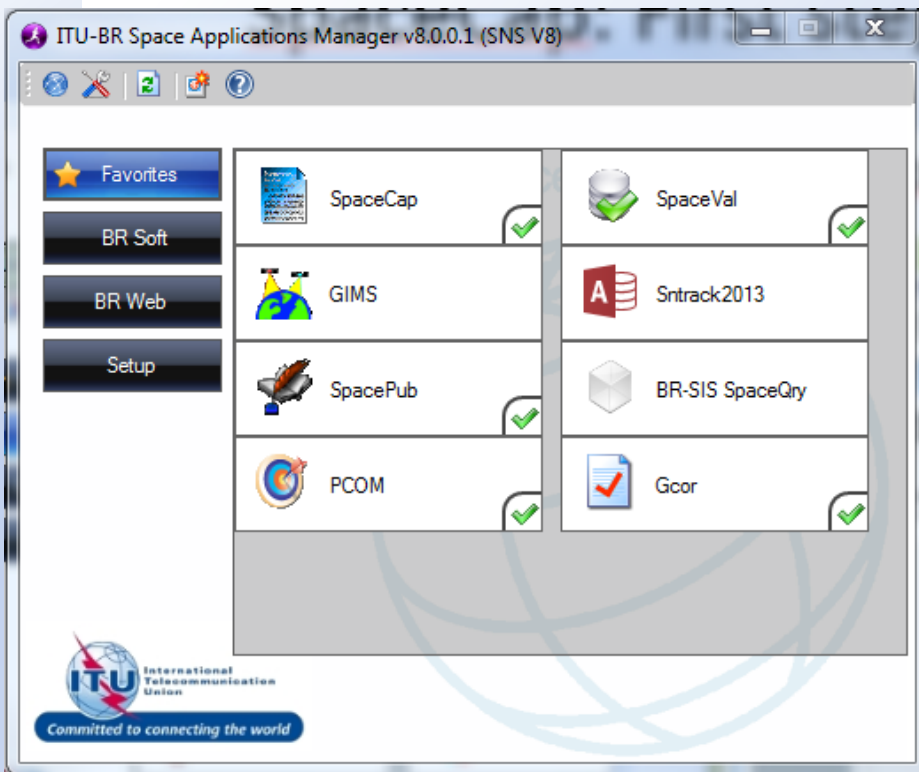
[www.itu.int/go/ITU-R/WRS-18](http://www.itu.int/go/ITU-R/WRS-18)



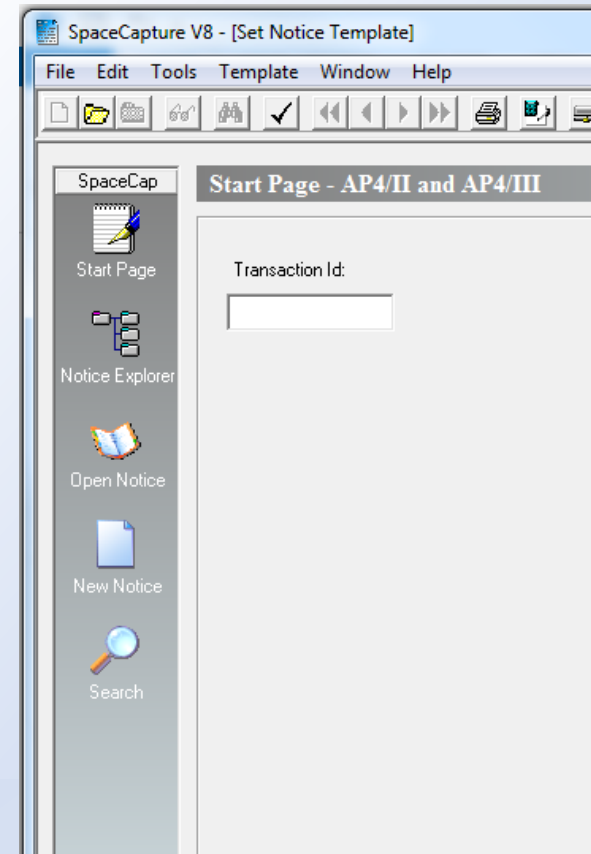


# SpaceCap: First steps

- Launch SAM

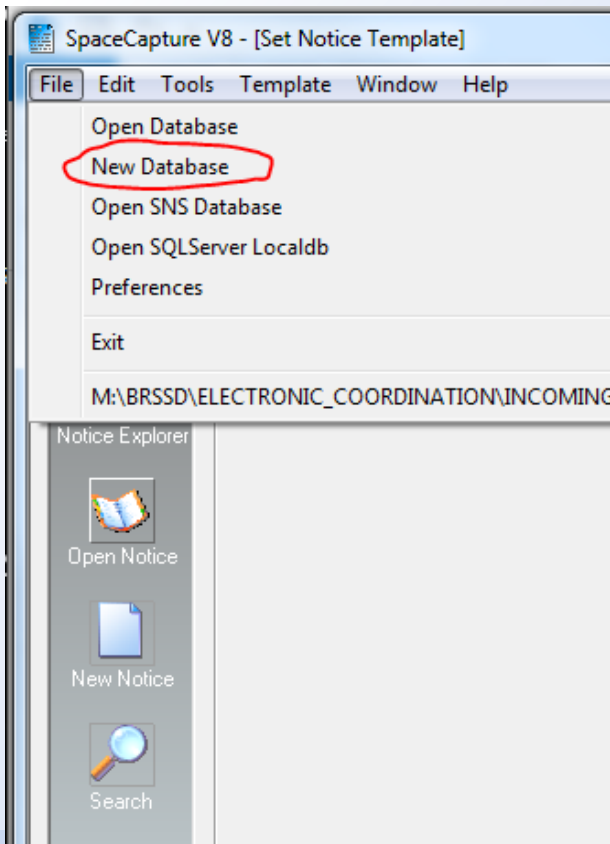


- Launch SpaceCap

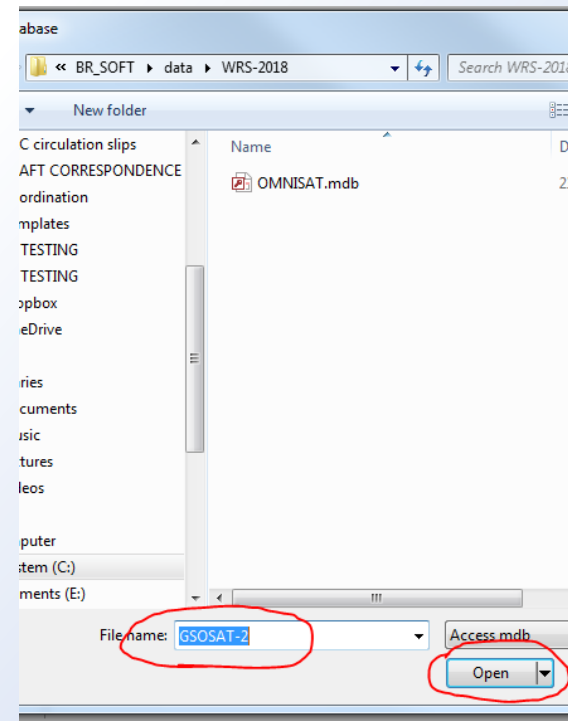


# SpaceCap: new database

- Create new database

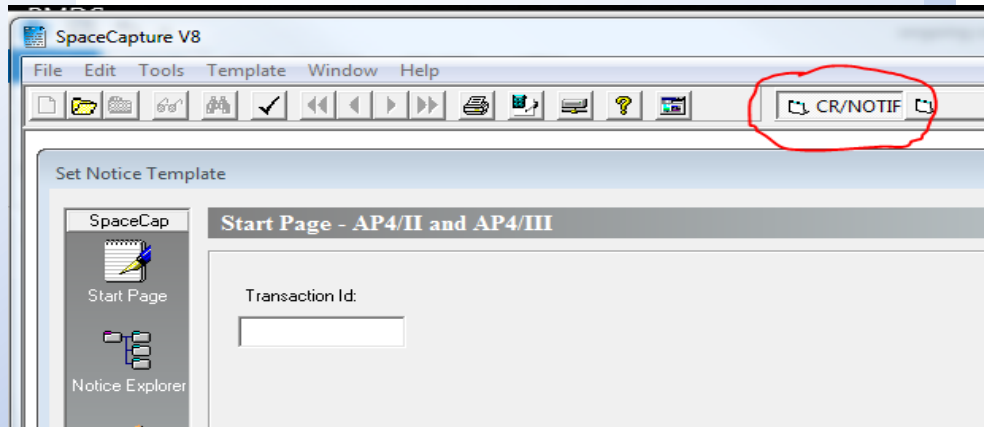


- Call it "GSOSAT-2"

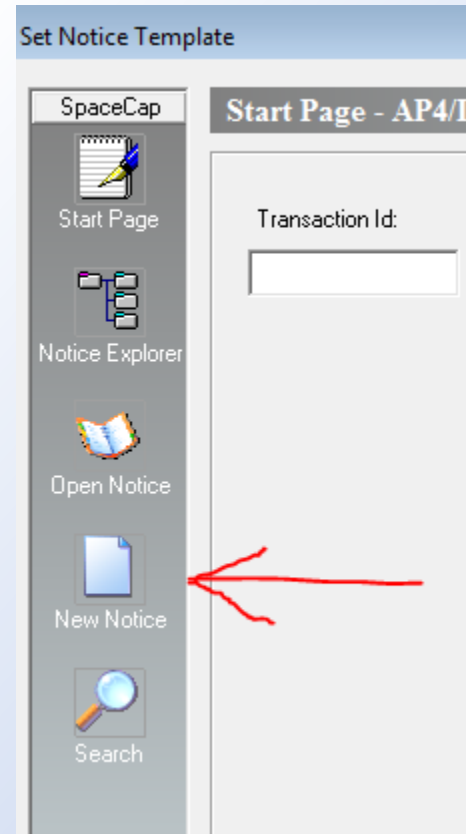


# New coordination notice

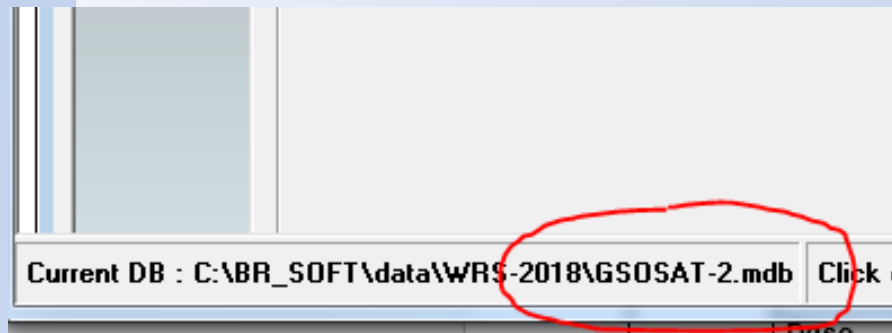
- Select type of notice



- Then click “New Notice”



- Verify current database





# Basic network information

- “Notice-level” data

A screenshot of a web form for 'Notice-level' data. At the top, there are radio buttons for 'No. 9.6 Coordination' (selected) and 'No. 1'. Below are checkboxes for 'No. 9.11A Applies' and 'Bands 21.'. Further down, there are radio buttons for 'Specific Earth Station Coordination un' and 'Earth Station Coordination between A'. A date field shows '05.12.2018' and an 'Administratio Serial Nbr' field. A1f1. Notifying Administration is a dropdown menu with 'F' selected and circled in red. A1f2. Notic submitted c is a dropdown menu. A1f3. Intergovernmental Satellite System is a dropdown menu. At the bottom, there is a section for 'Type of Satellite Network or Earth Station' with a radio button for 'GeoStationary Satellite Network' selected and circled in red.

- “Station-level” data

A screenshot of a web form for 'Station-level' data. The form is titled 'A1a. Identity of the Satellite Network' with a value of 'GSOSAT-2'. Below is 'A4a. For GeoStationary Satellites Only' with three sub-sections: '1. Nominal Orbital Longitude' (Degrees: 96.10, E/W: E), '2. Longitudinal tolerance (degrees)' (a. To West: 0.05, b. To East: 0.05), and '2c. Inclination Excursion' (0.05 degrees). Below these are several commitment fields: 'A16a. Commitment to meet off-axis power limitations...' (Yes, No, N/A selected), 'A17a. Commitment to meet power-flux density limits...' (Yes, No, N/A selected), 'A18a. Commitment of aircraft earth station...' (Yes, No, N/A selected), 'A16c. Commitment to meet separation distance of No. 5.509E and PFD limits of 5.509D' (Yes, No, N/A selected), and 'BR96 Commitment under resolves 1.5 of Res 156' (Yes, No, N/A selected).



# Beam characteristics

*Click on the "Beam" tab*

Characteristics of the Beam

B2.  
 Receiving Beam  
 Transmitting Beam

B1a. Beam Designation:   
Old Beam Designation (if changed)

B1b.  Steerable Beam


Add of the Beam  
 Mod of the Beam  
 Sup of the Beam

Beam Sensor

Antenna Characteristics

B3a1. Maximum Isotropic Gain +/- dBi   
B3d. Pointing Accuracy Degrees +/-

Antenna Radiation Pattern

B3c1. Co-polar Radiation Pattern Id:  

or B3c1 Pattern in the form of equations/diag. See Attach no.

Remember to specify the attachment no of the new Reference Pattern.

B3b1b - Method required in ROP 21.16  
 Applicable PFD will be met by applying the method in Annex 1 of ROP



# “Group-level” data

Click “Group” tab: “Common characteristics”

Characteristics Common to a Group of Frequencies    General Characteristics

C3a. Assigned Frequency Bandwidth:  (kHz)

No Sensors  
 Active Sensors  
 Passive Sensors

C4a. Lis Str	C4b. Nat Srv
EC	CP

C6. Polarization Type:  Mixed Polarization  
If linear, provide angle:

C2c. Frequency assignments are filed under No.4.4  
 BR98 For use in accordance with Resolution 163/164

C11a. Service Area as List of Countries or Geographic designations:

Service Area Number:

C8d1. Maximum Total Peak Power:  dBW  
C8d2. Contiguous Bandwidth:  (kHz)

Remarks:



# “Group-level” data

Click “General characteristics”

The screenshot shows a web application interface with two tabs at the top: "Characteristics Common to a Group of Frequencies" and "General Characteristics". The "General Characteristics" tab is selected and circled in red. Below the tabs, there are several form fields:

- A2b. Period of Validity: A text box containing "15" followed by "Years", circled in red.
- A3a. Operating Administration or Agency: A dropdown menu with "001 ... FORCES TERRESTRES" selected, circled in red.
- A3b. Responsible Administration: A dropdown menu with "A ... MONSIEUR LE DIRECTEUR GENERAL" selected, circled in red.





# Other “Group-level” data

- Emissions data

Emissions of the Associated Transmitting Stations											
C7a. Designation of Emission	C8a1/C8b1. Maximum Peak Power (dBW)	C8a2/C8b2. Maximum Power Density	Emission of Type C8b	C8c1. Minimum Peak Power (dBW)	C8c2. Attch No. Pep	C8c3. Minimum Power Density	C8c4. Attch No. Mpd	C8e1. C/N objective (total - clear sky) (dB)	C8e2. Attch No. C/N	C9 Modulation Char	
36M0G7W--	18.1	-57.4	<input type="checkbox"/>	8.1		-67.4		14.9			

- Frequency assignments

C2a1. Assigned Frequencies	k/M/GHz
	12.230000 G
	12.290000 G
	12.350000 G

# Associated Earth Station

C10b2. Type of Station  
 Typical  Specific

C10b1. Associated Earth Station Name  
TYPICAL K1D 2.4M

Old Station Name (if changed)

of the station  
 Add  
 Mod  
 Sup


C10d1. Cls Stn	C10d2. Nat Srv
TC	CP

C10d. Antenna Characteristics

3. Maximum Isotropic Gain 4. Beamwidth  
45.8 +/- dBi 0.8 Degrees

6. Receiving System Noise Temperature  
150

7. Diameter  
2.4 Meters

Antenna Radiation Pattern  
C10d5a1. Co-polar Radiation Pattern Id: 605 

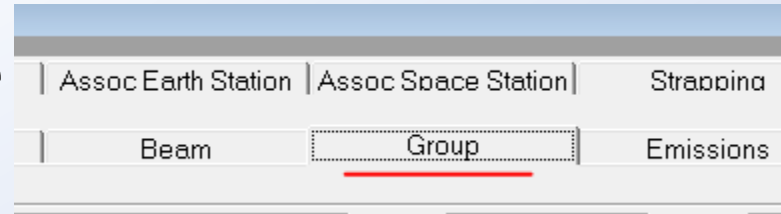
[REC-580-6 ==> APEREC015V01](#)

C10d5a2. Diagram attached. See Attachment no.:

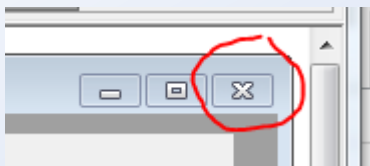
or diagram no in Gims database

# Congratulations!

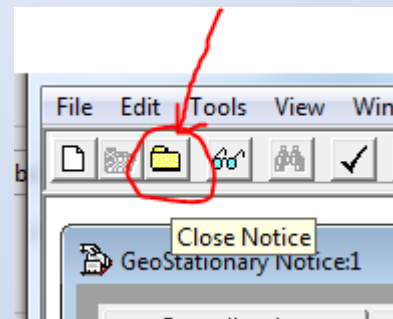
- Return to Group tab to force SpaceCap to save the associated earth station data



- Then you can close your notice by either on the



or the





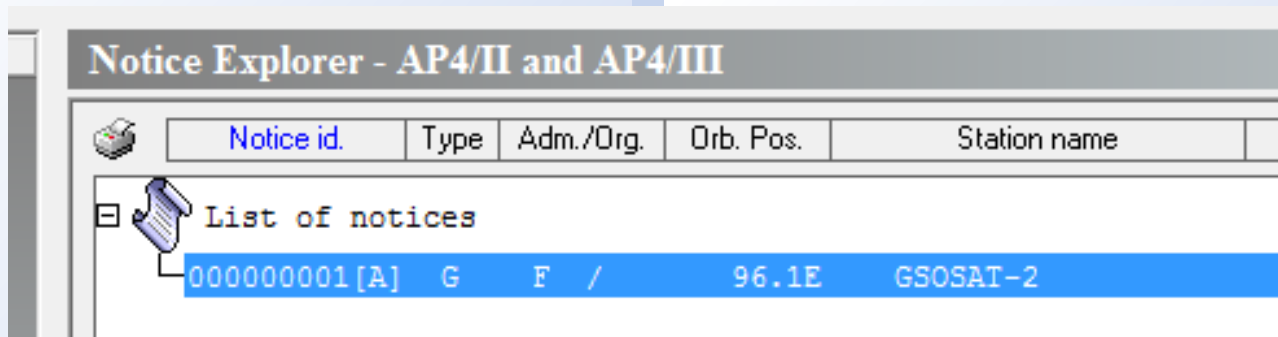
Using SpaceVal

# **RUNNING SPACEVAL ON GSOSAT-2**



# You should already be on the “Notice Explorer” screen

- Select the notice by clicking on it



The screenshot shows a window titled "Notice Explorer - AP4/II and AP4/III". It contains a table with the following columns: Notice id., Type, Adm./Org., Orb. Pos., and Station name. A tree view on the left shows a folder icon and the text "List of notices". Below this, a single row is selected and highlighted in blue, containing the following data: 000000001[A], G, F /, 96.1E, and GSOSAT-2.

Notice id.	Type	Adm./Org.	Orb. Pos.	Station name
000000001[A]	G	F /	96.1E	GSOSAT-2

- Click the SpaceVal button





# • SpaceVal dialog box

## Two main areas

Show all messages



Cross-Validate  
GIMS diagrams



Click SpaceVal



**Initiate Validation for:**  
Dbname: C:\BR\_SOFT\data\GSOSAT-2.mdb  
Ntc ID: 1 Adm: F Sat Name: GSOSAT-2 Orb Pos: 96.1 Action:A Status:01 D\_RCV: 21.11.2018

**Enter parameters for SpaceVal**  Run as external user

**Error message and level selection**  
 Show fatal messages only  Show all messages

**Validation Options**  
 Straps not provided - optional under appendix 4 (WRC2007)  
 Check frequency overlap using assigned frequency bandwidth

**Graphical Data Cross Validation**  
 Cross Validate   
GIMS Database (.mdb) [USB Key]\...\Coordination\_Request\_Exercise\GSOSAT-2 K2D GIMS.mdb

**ITU internal Options**  
 Skip API check  Skip FixThings  Partial Merge option

Press control button to start SpaceVal



The validation report will pop up when SpaceVal has completed checking – it should look like this

**SNS Validation Errors**

Rule Report First Prev Next Last Space Rules Earth Rules Plan Rules Items Summary Fatal

Validation Report for 1 User JONESGOR created on 21.11.2018 17:02:59 with SpaceVal 8.0.17  
C:\BR\_SOFT\data\GSOSAT-2.mdb

Ntc ID: 1 Adm: F Sat Name: GSOSAT-2 Orb Pos: 96.1 Action:A Status:01 D\_RCV: 21.11.2018

Fatal Errors: Warnings:

Beam	E/R	Grp id	Table	Field	Value	Row no	Val err	Rule	Severit	Ap4_Ref	Text
											VALIDATION COMPLETED; v8.0.17; NO ERRORS FOUND

# Hints and Suggestions



- Separate Mobile-, Fixed- and Broadcasting- groups into different beams



- Separate frequencies limited to a particular service area into different beams



- Contact the Bureau if you have questions about the Validation report