

**ITUWRS**  
**GENEVA2024**

2-6 December 2024  
Geneva, Switzerland

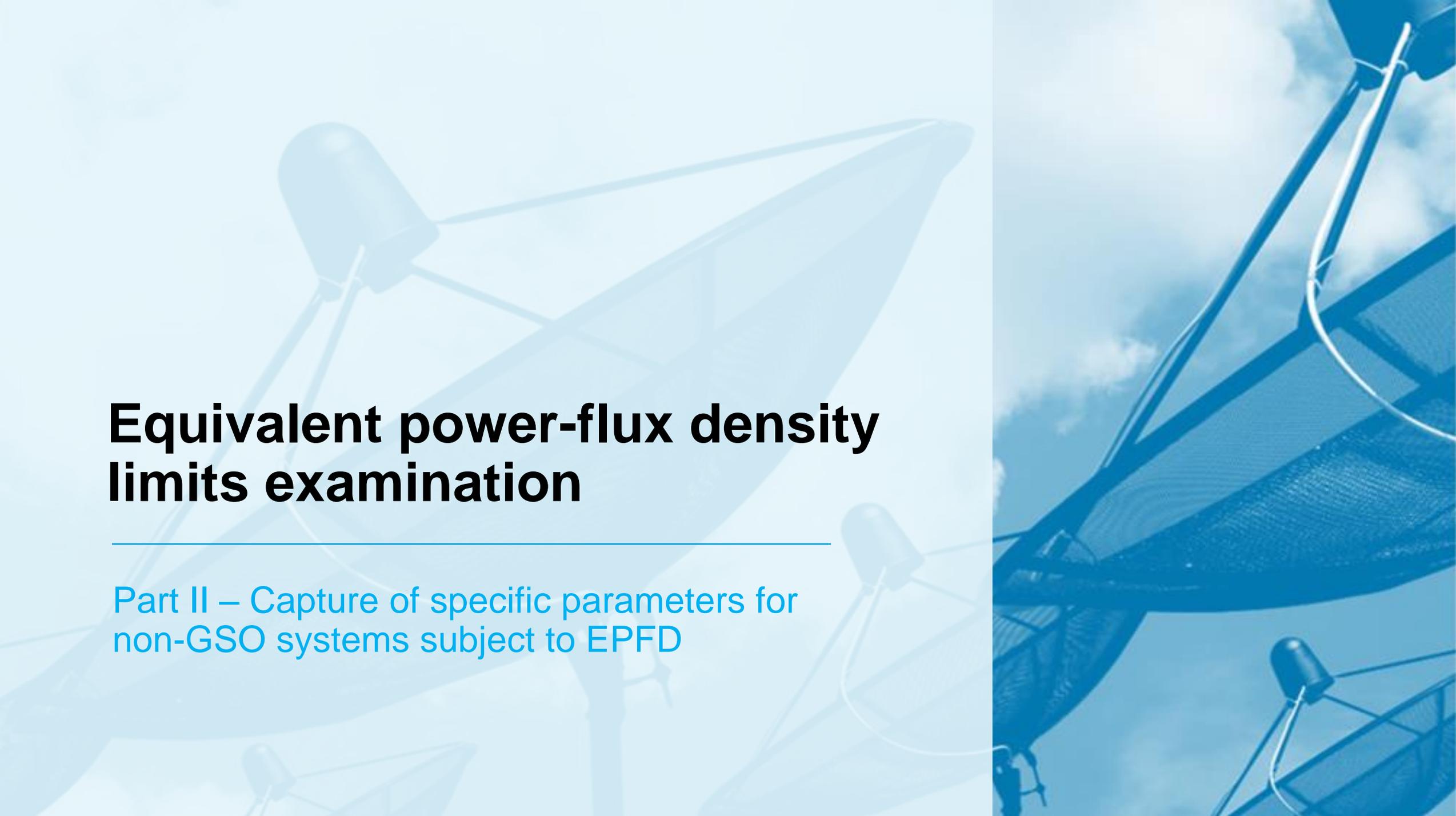


# ITU World Radiocommunication Seminar

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Equivalent power-flux density limits examination

2-6 December 2024, Geneva, Switzerland



# Equivalent power-flux density limits examination

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Part II – Capture of specific parameters for  
non-GSO systems subject to EPFD



# Satellite networks subject to Nos. 22.5C, 22.5D, 22.5F, 22.5L (EPFD limits)

Frequency ranges (MHz)	Direction	Limits Information
3700 -4200	E	Article 22, Table 22-1E↓, BW: 4 kHz
5925-6725	R	Article 22, Table 22-2↑, BW: 4 kHz
10700 - 11700	E	Appendix 5, Table 5-1, No. 9.7B↓, BW: 40 kHz
		Article 22, No. 22.5C4↓, BW: 40 kHz
		Article 22, Table 22-1A↓, BW: 40 kHz
		Article 22, Table 22-3↔, BW: 40 kHz
11700 - 12200	E	Appendix 5, Table 5-1, No. 9.7B↓, BW: 40 kHz
		Article 22, No. 22.5C4↓, BW: 40 kHz
		Article 22, Table 22-1A↓, BW: 40 kHz
		Article 22, Table 22-1D↓, BW: 40 kHz
12200 - 12750	E	Article 22, No. 22.5C8↓, BW: 40 kHz
		Article 22, Table 22-1D↓, BW: 40 kHz
		Article 22, RR 22.5C4↓, BW: 40 kHz
		Article 22, Table 22-1A↓, BW: 40 kHz
		Appendix 5, Table 5-1, No. 9.7B↓, BW: 40 kHz
		Article 22, Table 22-3↔, BW: 40 kHz
12500 - 13250	R	Article 22, Table 22-2↑, BW: 40 kHz
13750 - 14500	R	Article 22, Table 22-2↑, BW: 40 kHz

**Fixed-satellite service (FSS)  
(or space operation functions)**

- ↑ - Earth Station EIRP mask  
(item A.14.b of Appendix 4)
- ↓ - Space Station PFD mask  
(item A.14.c of Appendix 4)
- ↔ - Space Station EIRP mask  
(item A.14.a of Appendix 4)



# Satellite networks subject to Nos. 22.5C, 22.5D, 22.5F, 22.5L (EPFD limits)

Frequency ranges (MHz)	Direction	Limits Information
17300 - 17700	E	Article 22, Table 22-3↔, BW: 40 kHz
		Article 22, Table 22-1B↓, BW: 40 kHz
		Article 22, Table 22-1B↓, BW: 1000 kHz
17300 - 18100	R	Article 22, Table 22-2↑, BW: 40 kHz
17800 - 18600	E	Article 22, Table 22-3↔, BW: 40 kHz
		Article 22, Table 22-1B↓, BW: 40 kHz
		Appendix 5, Table 5-1, No. 9.7B↓, BW: 1000 kHz
		Article 22, Table 22-1B↓, BW: 1000 kHz
19700 - 20200	E	Article 22, Table 22-1C↓, BW: 40 kHz
		Appendix 5, Table 5-1, No. 9.7B↓, BW: 1000 kHz
		Article 22, Table 22-1C↓, BW: 1000 kHz
27500 - 28600	R	Article 22, Table 22-2↑, BW: 40 kHz
29500 - 30000	R	Article 22, Table 22-2↑, BW: 40 kHz
37500 - 42500	E	Article 22, No. 22.5L↓, BW: 1000 kHz
47200 - 50200	R	Article 22, No. 22.5L↑, BW: 1000 kHz
50400 - 51400	R	Article 22, No. 22.5L↑, BW: 1000 kHz

**Fixed-satellite service (FSS)  
(or space operation functions)**

- ↑ - Earth Station EIRP mask  
(item A.14.b of Appendix 4)
- ↓ - Space Station PFD mask  
(item A.14.c of Appendix 4)
- ↔ - Space Station EIRP mask  
(item A.14.a of Appendix 4)

## **>> Mandatory orbital information for networks subject to EPFD limits**

-  **Inclination of orbit** (item A.4.b.4.a of Appendix 4)
-  **Altitude of apogee and perigee, minimum operating height** (items A.4.b.4.d/e/f of Appendix 4)
-  **Longitude of ascending node (LAN)** (item A.4.b.4.j of Appendix 4)
-  **Phase angle** of the satellite within its orbital plane (item A.4.b.4.h of Appendix 4)
-  **Argument of perigee** (item A.4.b.4.i of Appendix 4)

# >> Mandatory orbital information for networks subject to EPFD limits

NonGeoStationary Notice:1

Notice **Station** Beam

**Orbital information** Orb. info. for sat. networks subject to No. 9.11A

A4b. Orbital Information for each Orbital Plane, where the Earth is the reference body

Orbital Plane id	4a. Inclination Angle	4b. Satellites in the plane	4c. Period ddd	4c. Period hh	4c. Period mm	4d. Apogee	4d. apog exp	4e. Perigee	4e. perig exp	4f. Minimum Altitude	4f. Min Alt exp	4i. Argument of the Perigee (degrees)	4m. space station uses sun-synchronous orbit	4n. loc time reference
1	26.00	32	0	1	37	580.00	0	580.00	0	580.00	0 0	0 0	no	
2	26.00	32	0	1	37	580.00	0	580.00	0	580.00	0 0	0 0	no	
3	26.00	32	0	1	37	580.00	0	580.00	0	580.00	0 0	0 0	no	
4	26.00	32	0	1	37	580.00	0	580.00	0	580.00	0 0	0 0	no	

A.17b,d,e Compliance with PFD or EPFD limits: Enter PFD or EPFD values

Commitments: (Please assign)

- Beam UHFR5
- Beam KAE1
- Beam KAE2
- Beam KAE3
- Beam KAE4
- ATTCE
- 51

**Inclination angle**

**Altitudes of apogee and perigee**

**Argument of perigee**

# >> Mandatory orbital information for networks subject to EPFD limits

NonGeoStationary Notice:1

Notice Station Beam

Notice Id: 1 Administration: CHN

A1a. Identity of the Satellite Network: TEST

A1c. A4b2. Number of Orbital Planes: 7

A4b3e1. Nbr of Satellites in the Plane: 32

Orbital information Orb. info. for sat. networks subject to No. 9.11A

A4b4. Orbital Parameters			A4b4h. Phase Data	
Orbital Plane id	4b. Satellites in the plane	4j. Longitude ascending node	Satellite Number	4h. Initial phase angle (Degrees)
1	32	0	1	0
2	32	30	2	11.25
3	32	60	3	22.5
4	32	90	4	33.75
5	32	120	5	45
6	32	150	6	56.25
7	32	180	7	67.5
8	32	180	8	78.75

Manage information for sat. networks subject to No. 22.5 C, D, F, L

LAN

Phase angle



## Mandatory orbital information for networks subject to EPFD limits



Indicator showing whether the space station uses **station-keeping to maintain a repeating ground track** and, if yes, **the time (period)** for the constellation to return to its starting position (items A.4.b.6.c and A.4.b.6.d of Appendix 4)



Indicator showing whether the space station should be modelled **with a specific precession rate of the ascending node instead of the J2 term** and, if yes, **the precession rate (degrees/day)**, measured counter-clockwise in the equatorial plane (items A.4.b.6.e and A.4.b.6.f of Appendix 4)



**Longitudinal tolerance** of the LAN (item A.4.b.6.j of Appendix 4)



# Mandatory orbital information for networks subject to EPFD limits

NonGeoStationary Notice:1

Notice **Station** Beam

Notice Id: 1 Administration: CHN Status: 50 Date: 11.01.2024

A1a. Identity of the Satellite Network: TEST

A1c. A4b2. Number of Orbital Planes: 58 A4b1. Reference body: (T) Earth A4b3a. Constellation: Y

A4b3e1. Nbr of Satellites to NH: A4b3e2. Nbr of Satellites to SH: A4b3b. Multi Configuration Type: (S) Single

**Orbital information** **Orb. info. for sat. networks subject to No. 9.11A**

A4b4. Orbital Parameters			A4b4h. Phase Data for Orbital Plane number 1	
Orbital Plane id	4b. Satellites in the plane	4j. Longitude ascending node	Satellite Number	4h. Initial phase angle (Degrees)
1	32	0	1	0
2	32	30	2	11.25
3	32	60	3	22.5
4	32	90	4	33.75
5	32	120	5	45
6	32	150	6	56.25
7	32	180	7	67.5
8	32	210	8	78.75

In order to calculate automatically phase angles, please insert values below:

Initial phase angle:

Step:

Apply to current orbit

Apply to all orbits with same number of satellites

Manage information for sat. networks subject to No. 22.5 C, D, F, L



# Mandatory orbital information for networks subject to EPFD limits

BRSS - Capture v10.0.0.59 - BETA

Save Notice  
Databases

Notices  
TEST.mdb / 1

EPFD Information PFD, EIRP Masks

A4b6bis. Operating parameters indicator : (L) Limited Set

**A4b6. Additional orbital information required for satellite networks subject to Nos. 22.5C, D, F, L**

Drag a column header here to group by that column

Orbit Id	6c Stn Keeping	6d. R-prd ddd	6d. R-prd hh	6d. R-prd mm	6d. R-prd ss	6e. Precession / J2 Term	6f. Precession Rate <sup>o</sup> /day	6j. Longitudinal Tolerance
1	No					J2 Term		0.1
2	No					J2 Term		0.1
3	No					J2 Term		0.1
4	No					J2 Term		0.1
5	No					J2 Term		0.1
6	No					J2 Term		0.1
7	No					J2 Term		0.1
8	No					J2 Term		0.1
9	No					J2 Term		0.1
10	No					J2 Term		0.1

Station keeping + Period

Precession rate

Tolerance

# >> **Mandatory AP4 items for networks subject to EPFD limits** (limited set of operating parameters)

## Earth-to-space direction:



**Maximum number of non-GSO satellites receiving simultaneously (Nco)** with overlapping frequencies from the associated earth stations within a given cell (item A.4.b.7.a of Appendix 4)



**Average number of associated earth stations (1/km<sup>2</sup>)** with overlapping frequencies per square kilometre within a cell (item A.4.b.7.b of Appendix 4)



**Average distance (km)** between co-frequency cells (item A.4.b.7.c of Appendix 4)

## >> Limited set of operating parameters

### Space-to-Earth direction:



**Maximum number of non-GSO satellites transmitting with overlapping frequencies (Nco)** to a given location within the latitude range (item A.4.b.6.a.1 of Appendix 4)

### Both directions:



**Minimum elevation angle** at which any associated earth station can transmit to or receive from (item A.4.b.7.cbis of Appendix 4)



**Type of zone (based on topocentric angle)** and the **width of the zone**, in degrees (items A.4.b.7.d.1 and A.4.b.7.d.2 of Appendix 4)



## Scenarios for EPFD examination

1

**Different sets of operating parameters can be submitted for different frequency ranges** (only one set of operating parameters can be submitted for each frequency range)

2

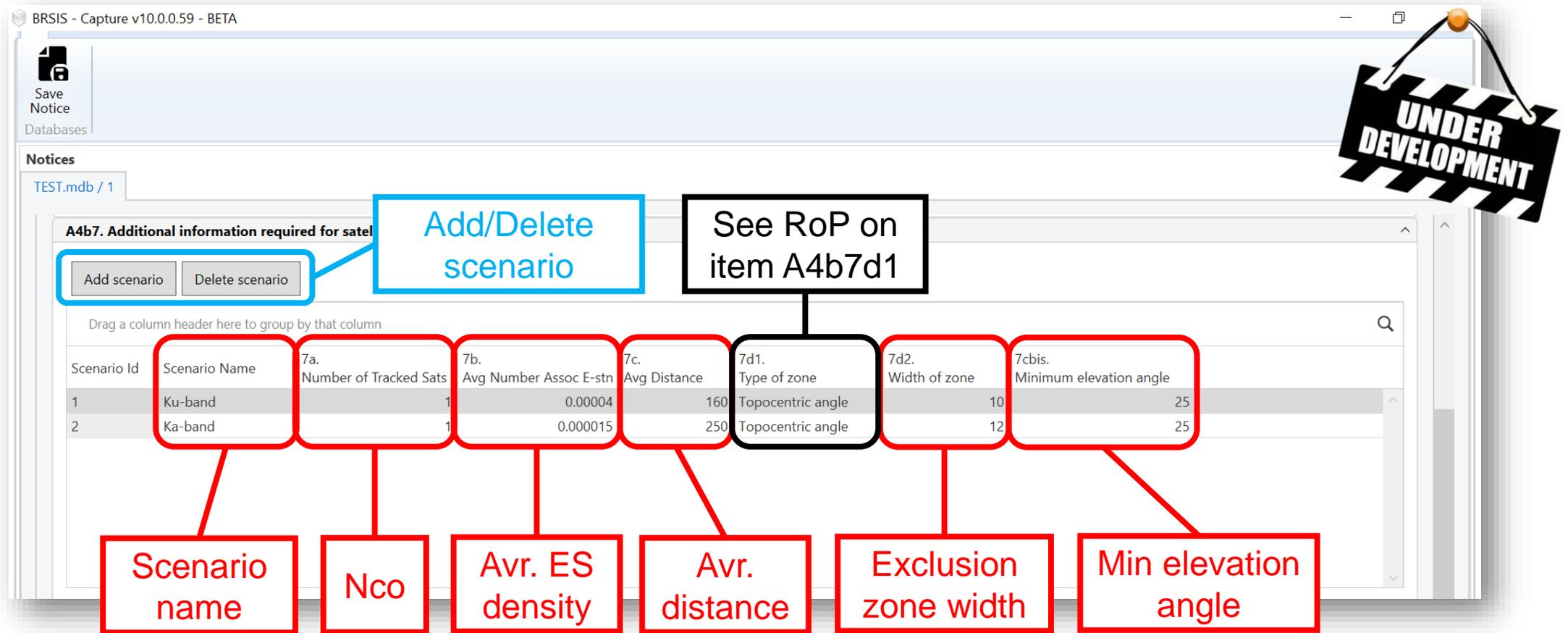
**“Examination scenario”** defines as an individual scenario sharing the same set of operating parameters applicable to specific frequency ranges

3

**Capturing of different “examination scenarios”** is now available in the new version of BR software **SpaceCap v.10.0**



# Scenarios for EPFD examination



**UNDER DEVELOPMENT**

**Add/Delete scenario**

**See RoP on item A4b7d1**

**Scenario name**

**Nco**

**Avr. ES density**

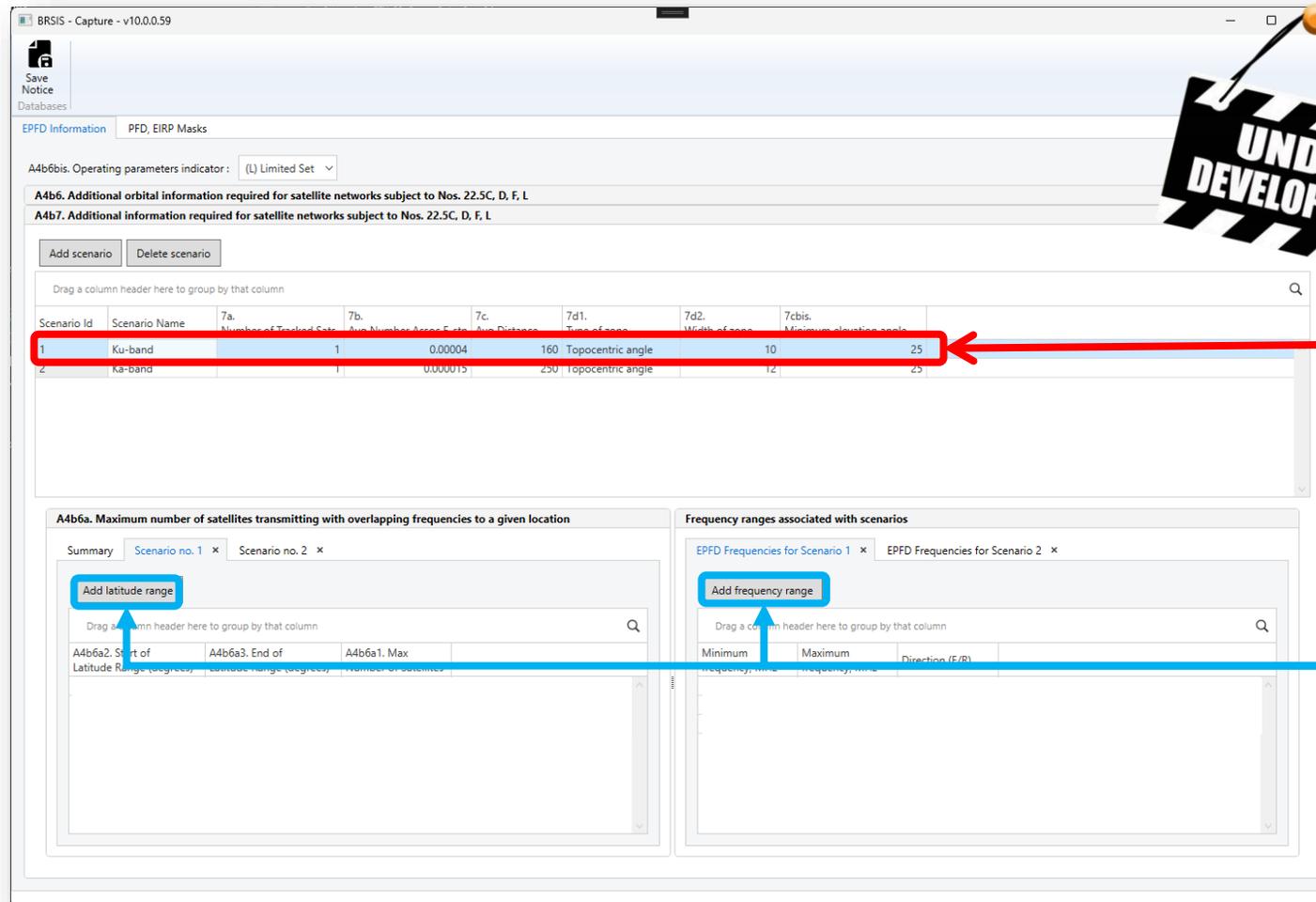
**Avr. distance**

**Exclusion zone width**

**Min elevation angle**

Scenario Id	Scenario Name	7a. Number of Tracked Sats	7b. Avg Number Assoc E-stn	7c. Avg Distance	7d1. Type of zone	7d2. Width of zone	7cbis. Minimum elevation angle
1	Ku-band	1	0.00004	160	Topocentric angle	10	25
2	Ka-band	1	0.000015	250	Topocentric angle	12	25

# >> Scenarios for EPFD examination



**UNDER DEVELOPMENT**

EPFD Information PFD, EIRP Masks

A4b6bis. Operating parameters indicator: (L) Limited Set

A4b6. Additional orbital information required for satellite networks subject to Nos. 22.5C, D, F, L

A4b7. Additional information required for satellite networks subject to Nos. 22.5C, D, F, L

Add scenario Delete scenario

Drag a column header here to group by that column

Scenario Id	Scenario Name	7a. Number of Tested Sat.	7b. Number of Sat. Etc.	7c. Avg. Distance	7d1. Topocentric angle	7d2. Topocentric angle	7cbis. Minimum elevation angle
1	Ku-band	1	0.00004	160	Topocentric angle	10	25
2	Ka-band	1	0.000015	250	Topocentric angle	12	25

A4b6a. Maximum number of satellites transmitting with overlapping frequencies to a given location

Summary Scenario no. 1 Scenario no. 2

Add latitude range

Drag a column header here to group by that column

A4b6a2. Start of Latitude Range (degrees)	A4b6a3. End of Latitude Range (degrees)	A4b6a1. Max. Number of Satellites
---	---	-----------------------------------

Frequency ranges associated with scenarios

EPFD Frequencies for Scenario 1 EPFD Frequencies for Scenario 2

Add frequency range

Drag a column header here to group by that column

Minimum frequency (MHz)	Maximum frequency (MHz)	Direction (E/R)
-------------------------	-------------------------	-----------------

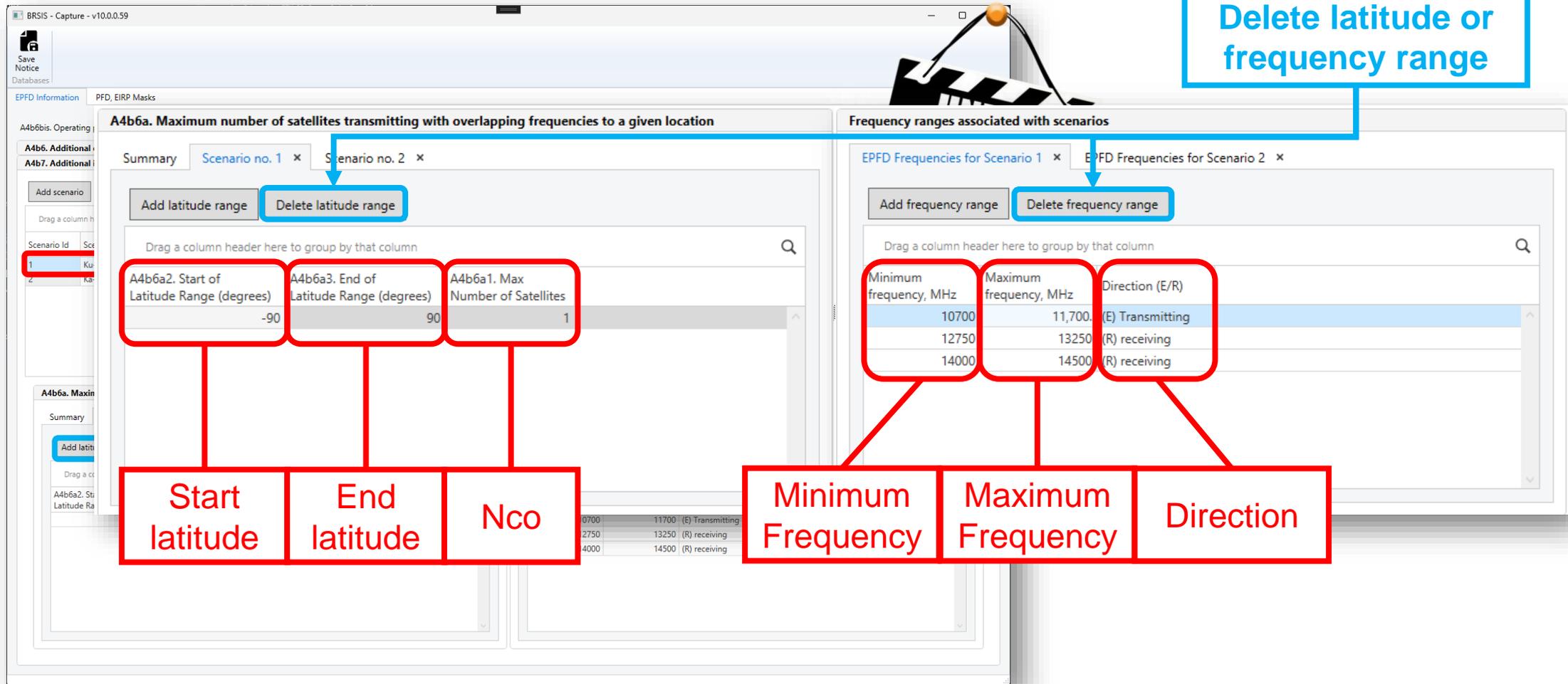
**Choose Scenario**

**Using the buttons “Add latitude range” and “Add frequency range” please provide additional information required for each Scenario**



# Scenarios for EPFD examination

Delete latitude or frequency range



The screenshot displays the SpaceCap software interface for scenario configuration and EPFD examination. It features two main panels: 'A4b6a. Maximum number of satellites transmitting with overlapping frequencies to a given location' and 'Frequency ranges associated with scenarios'.

**Scenario Configuration Panel (A4b6a):**

- Buttons: 'Add latitude range', 'Delete latitude range'.
- Table columns: 'A4b6a2. Start of Latitude Range (degrees)', 'A4b6a3. End of Latitude Range (degrees)', 'A4b6a1. Max Number of Satellites'.
- Table data: -90, 90, 1.
- Labels below table: Start latitude, End latitude, Nco.

**Frequency Ranges Panel:**

- Buttons: 'Add frequency range', 'Delete frequency range'.
- Table columns: 'Minimum frequency, MHz', 'Maximum frequency, MHz', 'Direction (E/R)'.
- Table data: 10700, 11700, (E) Transmitting; 12750, 13250, (R) receiving; 14000, 14500, (R) receiving.
- Labels below table: Minimum Frequency, Maximum Frequency, Direction.

# >> EIRP, PFD masks in XML format

## PFD mask for space station:

```

1 <?xml version="1.0" encoding="utf-8"?>
2 <satellite_system ntc_id="1" sat_name="TEST">
3   <pfd_mask mask_id="1" low_freq_mhz="17700" high_freq_mhz="18600" refbw_khz="1000"
4     type="azimuth_elevation" a_name="latitude" b_name="azimuth" c_name="elevation">
5     <by
6       <?xml version="1.0" encoding="UTF-8"?>
7       <satellite_system ntc_id="1" sat_name="TEST">
8         <pfd_mask c_name="deltaLongitude" b_name="alpha" a_name="latitude"
9           type="alpha_deltaLongitude" low_freq_mhz="18000" high_freq_mhz="18600"
10          mask_id="2" refbw_khz="40">
11          <by_a a="-55">
12            <by_b b="-90">
13              <pfd c="-69">-1000.0000</pfd>
14              <pfd c="-68">-136.1789</pfd>
15              <pfd c="-60">-135.6897</pfd>
16              <pfd c="-50">-135.0559</pfd>
17              <pfd c="-40">-134.4230</pfd>
18              <pfd c="-30">-133.8318</pfd>
19              <pfd c="-20">-133.3382</pfd>
20              <pfd c="-10">-133.0056</pfd>
21              <pfd c="0">-132.8876</pfd>
22              <pfd c="10">-133.0056</pfd>
23              <pfd c="20">-133.3382</pfd>
24              <pfd c="30">-133.8318</pfd>
25              <pfd c="40">-134.4230</pfd>
26              <pfd c="50">-135.0559</pfd>
27              <pfd c="60">-135.6897</pfd>
28              <pfd c="68">-136.1789</pfd>
29              <pfd c="69">-1000.0000</pfd>
30            </by_b>
31          </by_a>
32        </by_c c="azimuth">
33        </by_c>
34      </by_b>
35    </by_a>
36  </pfd_mask>
37 </satellite_system>
38 </by>
39 </pfd_mask>
40 </satellite_system>

```

## EIRP mask for earth station:

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <satellite_system ntc_id="1" sat_name="TEST">
3   <eirp_mask_es mask_id="1" low_freq_mhz="17300" high_freq_mhz="18100"
4     min_elev="5" a_name="latitude" d_name="separation angle"
5     refbw_khz="40" ES_ID="-1">
6     <by_a a="90">
7       <eirp d="0">46</eirp>
8       <eirp d="0.2">3.5</eirp>
9       <eirp d="1">3.5</eirp>
10      <eirp d="40">-22</eirp>
11      <eirp d="180">-22</eirp>
12    </by_a>

```

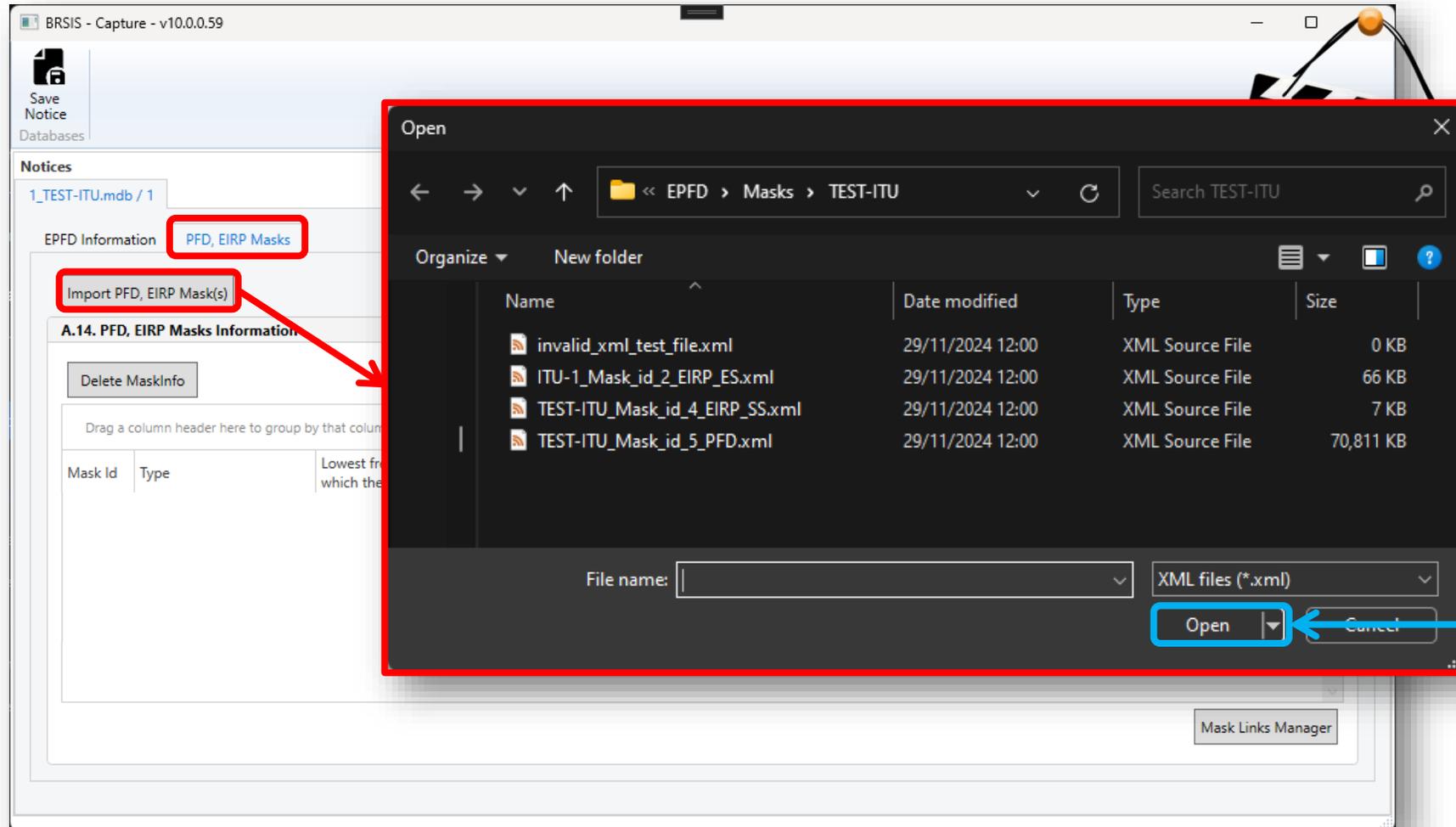
## EIRP mask for space station:

```

1 <?xml version="1.0" encoding="utf-8"?>
2 <satellite_system ntc_id="1" sat_name="TEST">
3   <eirp_mask_ss mask_id="3" low_freq_mhz="18000" high_freq_mhz="20200"
4     a_name="latitude" d_name="separation angle">
5     <by_a a="-55">
6       <eirp d="0">19</eirp>
7       <eirp d="20">19</eirp>
8       <eirp d="21">8.55</eirp>
9       <eirp d="31">-13.79</eirp>
10      <eirp d="41">-20.81</eirp>
11      <eirp d="51">-25</eirp>
12      <eirp d="180">-25</eirp>
13    </by_a>
14    <by_a a="55">
15      <eirp d="0">19</eirp>

```

# >> Import EIRP, PFD masks to SNS database



Choose all required EIRP and PFD masks

Click Open

# >> EIRP, PFD mask links



BRSIS - Capture - v10.0.0.59

Save Notice  
Databases

Notices  
TEST.mdb / 1

EPFD Information **PFD, EIRP Masks**

Import PFD, EIRP Mask(s)

**A.14. PFD, EIRP Masks Information**

Add MaskInfo Delete MaskInfo

Drag a column header here to group by that column

Mask Id	Type	Lowest frequency for which the mask is valid	Highest frequency for which the mask is valid	Type of the pfd or eirp mask	Scenario ID for EPFD information	Assigned orbital planes (sats)
1	PFD SS	19700	20200	alpha angle, difference in longitude, latitude		
2	PFD SS	10700	11700	alpha angle, difference in longitude, latitude		
3	EIRP ES	29500	30000	off-axis angle, latitude		
4	EIRP ES	12750	13250	off-axis angle, latitude		
5	EIRP ES	14000	14500	off-axis angle, latitude		
6	EIRP SS	10700	11700	off-axis angle, latitude		

Mask Links Manager

Imported EIRP and PFD masks should be associated with Scenario(s) and orbital plane(s) (satellites)

Mask ID, Lowest frequency, Highest frequency, Reference bandwidth, Mask type

# >> EIRP, PFD mask vs Scenario

BRSIS - Capture - v10.0.0.59

Mask Info Management for Notice #1 | TEST

Back Save

Assigned Scenarios Assigned Orbital Planes

**Scenarios Information**

Scenario Id	Scenario Name	7a. Number of Tracked...	7b. Avg Number Assoc...	7c. Avg Distance	7d1. Type of zone	7d2. Width of zone	7cbis. Minimum elevation...
1	Ku-band	1	4E-05	160	Y	10	25
2	Ka-band	1	1.5E-05	250	Y	12	25

**PFD, EIRP Masks Information**

Assign	Mask Id	Type	Lowest frequency for which the mask is valid	Highest frequency for which the mask is valid	Type of the pfd or eirp mask	Scenario ID for EPFD information	Assigned orbital planes (sats)
<input type="checkbox"/>	1	PFD SS	19700	20200	alpha angle, difference in longitude, latitude		
<input checked="" type="checkbox"/>	2	PFD SS	10700	11700	alpha angle, difference in longitude, latitude	1	
<input type="checkbox"/>	3	EIRP ES	29500	30000	off-axis angle, latitude		
<input checked="" type="checkbox"/>	4	EIRP ES	12750	13250	off-axis angle, latitude	1	
<input checked="" type="checkbox"/>	5	EIRP ES	14000	14500	off-axis angle, latitude	1	
<input checked="" type="checkbox"/>	6	EIRP SS	10700	11700	off-axis angle	1	



Choose Scenario

Assign EIRP, PFD masks to this Scenario

# >> EIRP, PFD mask vs Scenario

BRSIS - Capture - v10.0.0.59

Mask Info Management for Notice #1 | TEST

Back Save

Assigned Scenarios Assigned Orbital Planes

**Scenarios Information**

Scenario Id	Scenario Name	7a. Number of Tracked...	7b. Avg Number Assoc...	7c. Avg Distance	7d1. Type of zone	7d2. Width of zone	7cbis. Minimum elevation...
1	Ku-band	1	4E-05	160	Y	10	25
2	Ka-band	1	1.5E-05	250	Y	12	25

**PFD, EIRP Masks Information**

Assign <input checked="" type="checkbox"/>	Mask Id ^	Type	Lowest frequency for which the mask is valid	Highest frequency for which the mask is valid	Type of the pfd or eirp mask	Scenario ID for EPFD information	Assigned orbital planes (sats)
<input checked="" type="checkbox"/>	1	PFD SS	19700	20200	alpha angle, difference in longitude, latitude	2	
<input checked="" type="checkbox"/>	3	EIRP ES	29500	30000	off-axis angle, latitude	2	



Since only one Scenario can be associated with each mask, for second Scenario only remaining masks will be shown

# >> EIRP, PFD mask vs Orbital planes

Mask Info Management for Notice #1 | TEST

Assigned Scenarios: **Assigned Orbital Planes**

**PFD, EIRP Masks Information**

Mask Id	Type	Lowest frequency for which the mask is v...	Highest frequency... which the mask is v...	Type of the pfd or eirp mask	Scenario ID for EIRP information	Assigned orbital plane(s)
1	PFD SS	19700	20200	alpha angle, differe...	2	ALL
2	PFD SS	10700	11700	alpha angle, differe...	1	
3	EIRP ES	29500	30000	off-axis angle, latit...	2	
4	EIRP ES	12750	13250	off-axis angle, latit...	1	
5	EIRP ES	14000	14500	off-axis angle, latit...	1	
6	EIRP SS	10700	11700	off-axis angle	1	

**Associated Orbital Planes (Satellites) Information**

Assign selected mask to specific satellites | Assign same orbital planes to specific masks

Assign	Orbit plane no.	All Satellites	Configuration	Number of satellites	Inclination angle	LAN	Argument of perigee
<input checked="" type="checkbox"/>	1			32	26	0	0
<input checked="" type="checkbox"/>	2			32	26	30	0
<input checked="" type="checkbox"/>	3			32	26	60	0
<input checked="" type="checkbox"/>	4			32	26	90	0
<input checked="" type="checkbox"/>	5			32	26	120	0
<input checked="" type="checkbox"/>	6			32	26	150	0
<input checked="" type="checkbox"/>	7			32	26	180	0
<input checked="" type="checkbox"/>	8			32	26	210	0
<input checked="" type="checkbox"/>	9			32	26	240	0
<input checked="" type="checkbox"/>	10			32	26	270	0



Choose mask

Assign orbital plane(s) with this mask

# >> EIRP, PFD mask vs Orbital planes

Mask Info Management for Notice #1 TEST

Back Save **Save and go Back**

Assigned Scenarios **Assigned Orbital Planes**

**PFD, EIRP Masks Information**

Mask Id	Type	Lowest frequency for which the mask is v...	Highest frequency... which the mask is v...	Type of the pfd or eirp mask	Scenario ID for EPFD information	Assigned orbital planes (sats)
1	PFD SS	19700	20200	alpha angle, differ...	2	ALL
2	PFD SS	10700	11700	alpha angle, differ...	1	1,2,5
3	EIRP ES	29500	30000	off-axis angle, latit...	2	5,6(1,2)
4	EIRP ES	12750	13250	off-axis angle, latit...	1	
5	EIRP ES	14000	14500	off-axis angle, latit...	1	
6	EIRP SS	10700	11700	off-axis angle	1	

**Associated Orbital Planes (Satellites) Information**

Assign selected mask to specific satellites    Assign same orbital planes to specific masks

Assign	Orbit plane no.	All Satellites	Configuration	Number of satellites	Inclination angle	LAN	Argument of perigee
<input type="checkbox"/>	1			32	26	0	0
<input type="checkbox"/>	2			32	26	30	0
<input type="checkbox"/>	3			32	26	60	0
<input type="checkbox"/>	4			32	26	90	0
<input type="checkbox"/>	5			32	26	120	0
<input checked="" type="checkbox"/>	6	1,2		32	26	150	0
<input type="checkbox"/>	7			32	26	180	0
<input type="checkbox"/>	8			32	26	210	0
<input type="checkbox"/>	9			32	26	240	0
<input type="checkbox"/>	10			32	26	270	0

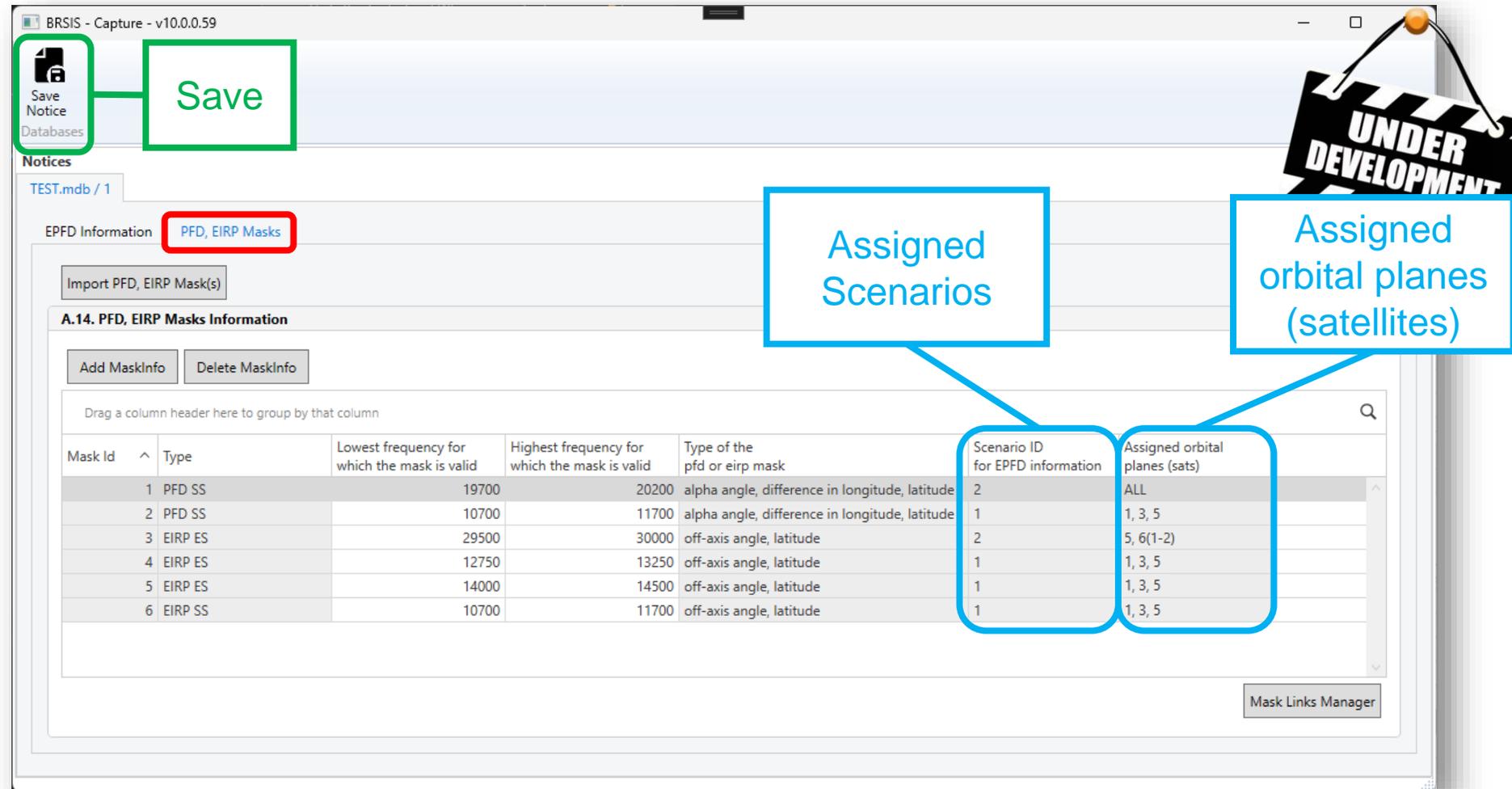


If only some satellites in orbital plane should be assigned

Function "Assign selected mask to specific satellites" should be used

There will be also function to assign the same orbital planes (satellites) to specified masks

# >> EIRP, PFD mask links



**Save**

**Assigned Scenarios**

**Assigned orbital planes (satellites)**

**UNDER DEVELOPMENT**

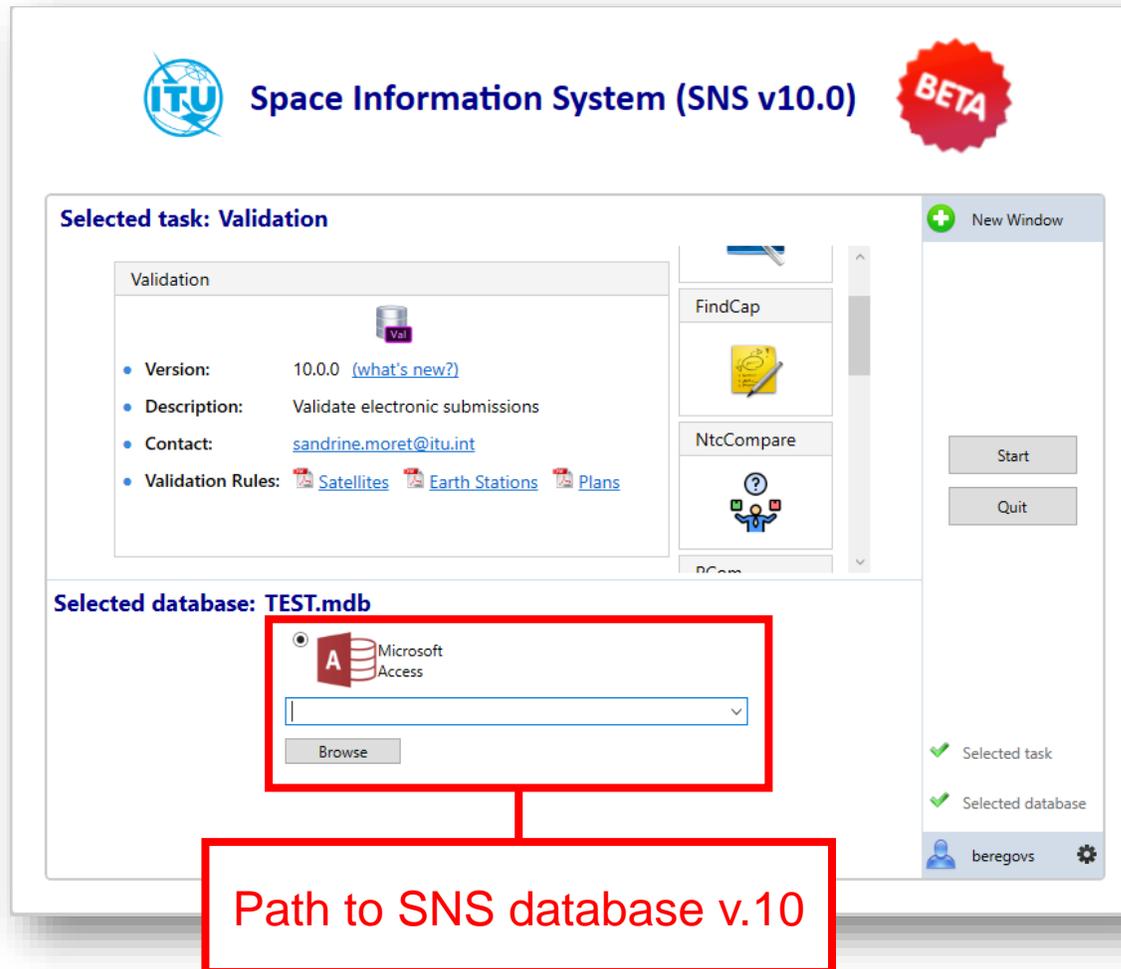
EPFD Information: PFD, EIRP Masks

A.14. PFD, EIRP Masks Information

Mask Id	Type	Lowest frequency for which the mask is valid	Highest frequency for which the mask is valid	Type of the pfd or eirp mask	Scenario ID for EPFD information	Assigned orbital planes (sats)
1	PFD SS	19700	20200	alpha angle, difference in longitude, latitude	2	ALL
2	PFD SS	10700	11700	alpha angle, difference in longitude, latitude	1	1, 3, 5
3	EIRP ES	29500	30000	off-axis angle, latitude	2	5, 6(1-2)
4	EIRP ES	12750	13250	off-axis angle, latitude	1	1, 3, 5
5	EIRP ES	14000	14500	off-axis angle, latitude	1	1, 3, 5
6	EIRP SS	10700	11700	off-axis angle, latitude	1	1, 3, 5

Mask Links Manager

# BR-SIS Validation v10.0



ITU Space Information System (SNS v10.0) BETA

**Selected task: Validation**

- Version: 10.0.0 ([what's new?](#))
- Description: Validate electronic submissions
- Contact: [sandrine.moret@itu.int](mailto:sandrine.moret@itu.int)
- Validation Rules: Satellites Earth Stations Plans

**Selected database: TEST.mdb**

Microsoft Access

Browse

Path to SNS database v.10

Cross-validation option with BR-SIS Validation v10.0 will be available for validating the limited operating parameters for EPFD examination against the imported EIRP, PFD masks for non-GSO satellite systems

# Thank you!

ITU – Radiocommunication Bureau

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