Terrestrial Workshop on the Preparation of Notices for Fixed and Mobile Services

Overview of the notification workshop: Fixed and Mobile Services

➢ General guidelines on the preparation of notices for the Fixed and Mobile Services
  ❑ Multiple links
  ❑ Additional data items for some radiocommunication services
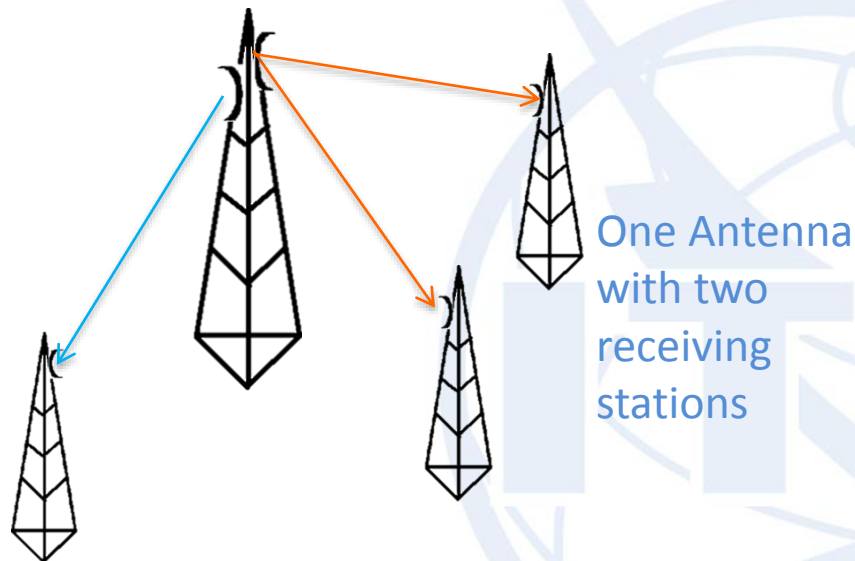 ❑ Reference documents for notification
➢ Exercises

Guidelines on the preparation of notices: Fixed and Mobile Services

➢ The identifying elements for fixed and mobile frequency assignment are:

  ❑ frequency, geographical coordinates, class of station, designation of emission and operating hours;

  ❑ unique identification code given by the administration.

➢ All notices submitted to the Bureau should be complete and validated by using either:

  ❑ TerRaNotices

  ❑ TerRaNV

  ❑ Online validation (Beta)

http://www.itu.int/ITU-R/terrestrial/OnlineValidation/Login.aspx

  ➢ Incomplete notices are returned to the notifying administration

Multiple links

One Antenna with two receiving stations

One Antenna with one receiving station

How to notify a transmitting station with several links?

All the transmitting links originating from the same transmitter (same identifying elements) shall be notified in **one** notice.

Additional data items for some radiocommunication services

➤ Call sign or station Identification is mandatory for:

  ❑ fixed service in the bands below 28 MHz;

  ❑ safety services (aeronautical, maritime, etc.);

➤ Call Sign if provided shall be in conformity with the Article 19, section III of RR and Appendix 42 to RR;

> **http://www.itu.int/en/ITU-R/terrestrial/fmd/Pages/identifications.aspx**

➤ For frequency assignments that fall within bands shared on an equal basis with space services, the following data items are mandatory:

  ❑ Elevation angle;

  ❑ Antenna height;

  ❑ Altitude of site above sea level;

  ❑ Polarization;

  ❑ The radiated power and maximum antenna gain shall be notified in isotropical values.

Reference documents for notification

➢ Guidelines and examples of different FXM notice types:

http://www.itu.int/en/ITU-R/terrestrial/tpr/Pages/FXMNotices.aspx#FXMNotices

➢ Preface to the BR IFIC

http://www.itu.int/en/ITU-R/terrestrial/brific/Pages/default.aspx

➢ For the workshop, the following documents are needed:
- ❑ Fixed and Mobile notification exercises
- ❑ Necessary bandwidth and class of emission
- ❑ Class of stations

http://www.itu.int/en/ITU-R/terrestrial/workshops/assistSeychelles/Pages/default.aspx

- ❑ TerRaNotices

14.931 GHz

Tx

Rx

A point to point **micro wave link** in the **fixed service**:

T11 Notice Type
Class of station: FX

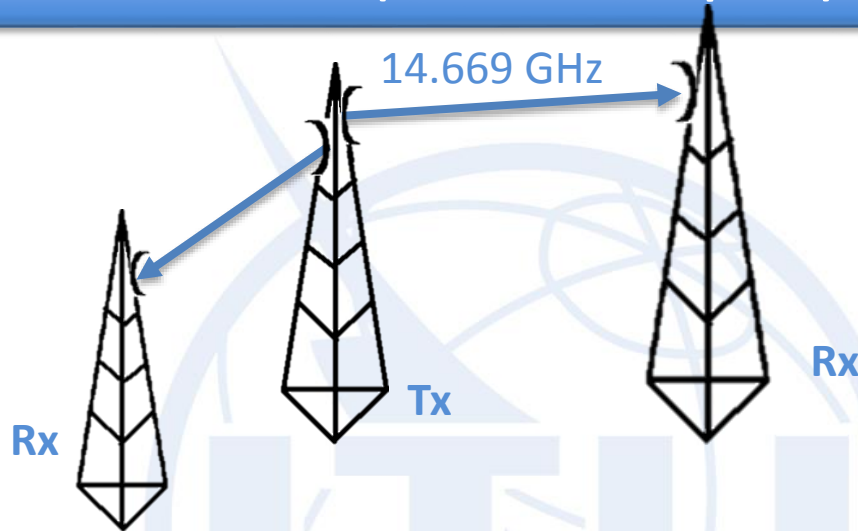# FXM 01: Fixed service (point-to-point)

Prepare an electronic notice of frequency 14.93100 GHz used for the operation of fixed link based on the information below, for its recording in the Master Register.

To prepare this notice we will use the "Wizard" functionality of TerRaNotices and we will select the administration of Seychelles (SEY) as the notifying administration and "FX" for class of station.

Class of Emission	**D7W--**
Bandwidth	**28 MHz**
Transmitting antenna site name	**VICTORIA**
Coordinates of the transmitting antenna site	**55°27'14"E - 4°37'26"S**
Nature of service	**Preface Chapter IV, Section 7**
Date of bringing into use	**Maximum 3 months in advance**
Address code	**Preface Chapter IV, Section 3**
Unique identification code of the assignment	**To be provided by the Administration, if notified it shall be unique**
Antenna	
Antenna directivity	**Directional**
Beamwidth	**1.2°**
Azimuth of maximum radiation	**295°**
Effective radiated power	**30.2 dBW**
Power delivered to the antenna	**-11 dBW**
Maximum Gain relative to a half wave dipole	**41.2 dB**
Name of the location of the receiving station	**ST LOUIS HILL**
Coordinates of the receiving station	**55°26'31"E - 4°37'06"S**

FXM 02: Fixed service (Point-to-Multipoint) in shared bands

14.669 GHz

Rx

Tx

Rx

Article 5:

14.5 -14.8 FIXED

FIXED-SATELLITE

(Earth-to-space)

MOBILE

Space research

A point to multipoint **micro wave link** in the **fixed service in shared bands**: T11 Notice Type

Class of station: FX

FXM 02: Fixed service (Point-to-Multipoint) in shared bands

Prepare an electronic notice of frequency 14.669 GHz, which falls within the bands shared on equal basis with the space services, used for the operation of two fixed links based on the information below, for its recording in the Master Register.

The two links are originating from the same transmitting station associated with two antennas.

To prepare this notice we will use the "New File" functionality of TerRaNotices and the functionality to add many antennas to a single notice.

As the assigned frequency falls within the bands shared on equal basis with space services, the following fields are mandatory: Altitude of site above sea level, Height of Antenna above ground level, Elevation angle and Polarization.

Class of Emission	G7WDT
Bandwidth	27.5 MHz
Transmitting antenna site name	ST LOUIS HILL
Coordinates of the transmitting antenna site	55°26'31"E - 4°37'06"S
Altitude of site above sea level	160 m
Date of bringing into use	Maximum 3 years in advance
Antenna 1	
Height of the Antenna above ground level*	20 m
Antenna directivity	Directional
Azimuth of maximum radiation	115°
Beamwidth	1.5°
Polarization	Vertical
Elevation angle	-12°
Maximum antenna gain relative to isotropic antenna	42 dBi
Equivalent isotropically radiated power	31 dBW
Power delivered to the antenna	-11 dBW
Name of the location of the receiving station	VICTORIA
Coordinates of the receiving station	55°27'14"E - 4°37'26"S
Antenna 2	
Height of the Antenna above ground level*	30 m
Antenna directivity	Directional
Azimuth of maximum radiation	273°
Beamwidth	1.5°
Polarization	Horizontal
Elevation angle*	-10°
Maximum antenna gain relative to isotropic antenna	43 dBi
Equivalent isotropically radiated power	32 dBW
Power delivered to the antenna	-11 dBW
Name of the location of the receiving station	BEAU VALLON
Coordinates of the receiving station	55°25'38"E - 4°37'03"S

1) Land station in the Land mobile service (Base station)

959 MHz

10 km

Base station
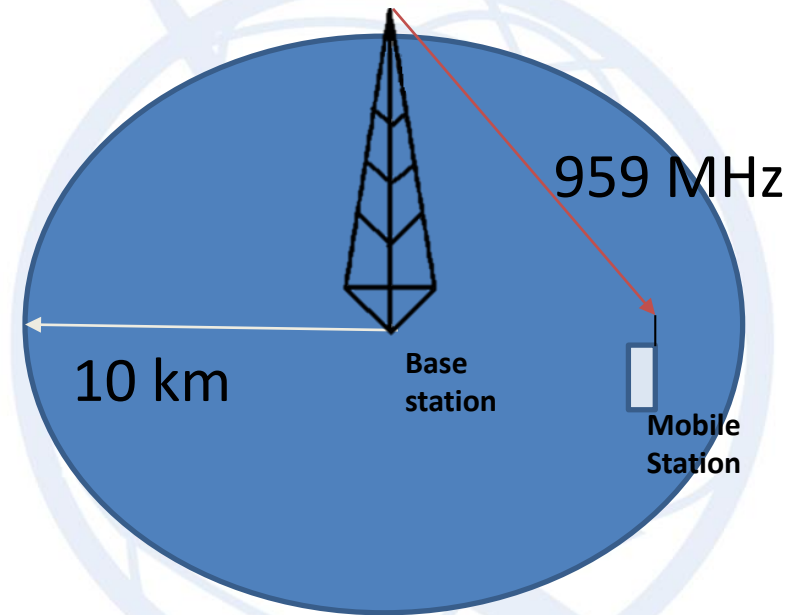
Mobile Station

A point to area in the Land mobile service:

➡ T12 Notice Type
Class of station: FB

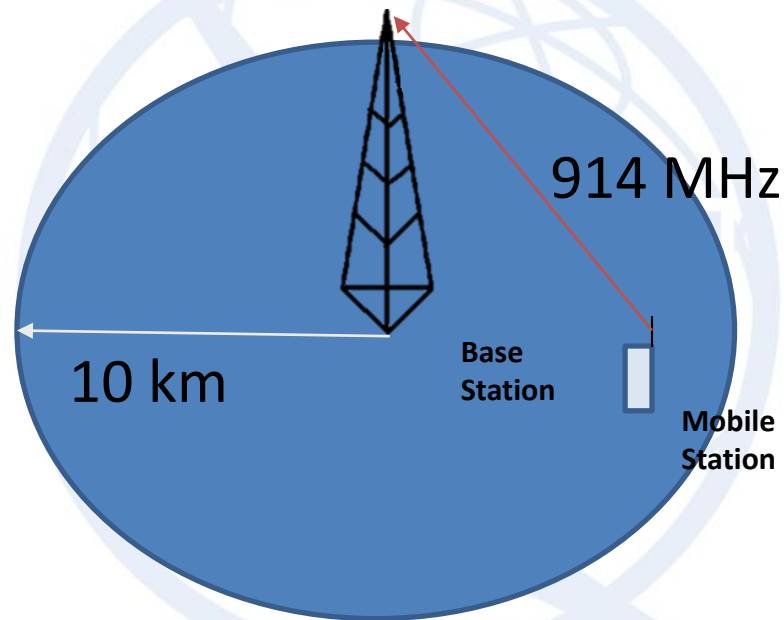# FXM 03: Land mobile service (point-to-area)

1. Prepare an electronic notice file of frequency **959.000 MHz** assigned to a **base station** having a circular receiving area of a radius of 10 km for its recording in the **Master Register.**

Bandwidth	**200 kHz**
Class of emission	**G7W--**
Transmitting antenna site name	**VICTORIA**
Location of transmitting station	**55°26'55"E - 4°37'19"S**
Nature of service	**Preface Chapter IV, Section 7**
Date of bringing into use	**Maximum 3 months in advance**
Address code	**Preface Chapter IV, Section 3**
Effective radiated power	**30 dBW**
Antenna directivity	**Omnidirectional**

To prepare these notices we will first use "New Notice" functionality of TerRaNotices with SEY as the notifying administration and then we will use "Insert new notice" functionality of TerRaNotices. This functionality enables to have more than one notice in a file.

2) Mobile station in the land mobile service (Handset)

914 MHz

10 km

Base Station

Mobile Station

An area to point in the Land mobile service:
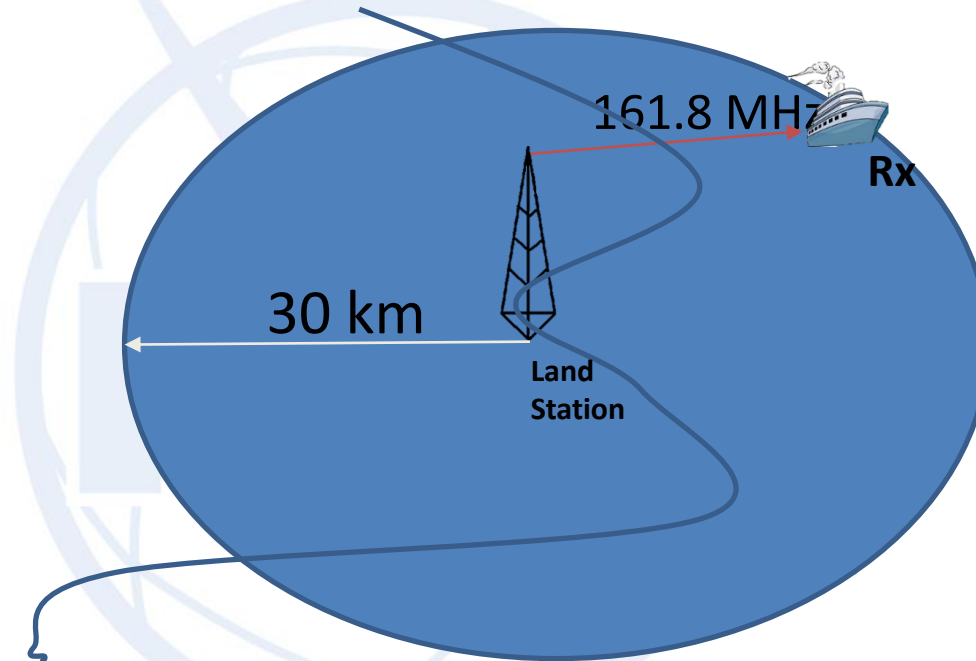
➡ T13 Notice Type
Class of station: ML

FXM 03: Land mobile service (area-to-point)

2. Prepare an electronic notice file of frequency **914.000 MHz** assigned to the associated Receiving **land mobile station** (handset) of the above base station, for its recording in the **Master Register.**

Bandwidth	**200 kHz**
Class of emission	**G7W--**
Name of the location of the receiving station	**VICTORIA**
Coordinates of the receiving station	**55°26'55"E - 4°37'19"S**
Nature of service	**Preface Chapter IV, Section 7**
Date of bringing into use	**Maximum 3 months in advance**
Address code	**Preface Chapter IV, Section 3**
Radius	**10 km**
Effective radiated power	**3 dBW**
Antenna directivity	**Omnidirectional**

Land station in the maritime mobile service

161.8 MHz

Rx

30 km

**Land
Station**

A point to area in the Maritime mobile service:

➡ T12 Notice Type
Class of station: FC

FXM 04: Maritime mobile Service (point-to-area)

Prepare an electronic notice, for the recording in the Master Register of frequency 161.800 MHz assigned to a coast station open to public correspondence situated in **VICTORIA (SEY)** having a circular receiving area of a radius of 30 km.

For coast stations, Call sign or Station identification is mandatory. Station identification can be composed of any printable characters (max. 20). However, if Call sign is notified then it shall be in conformity with the provisions of Article 19 and Appendix 42.

To prepare this notice we will use "New Notice" functionality of TerRaNotices.

Bandwidth	**16 kHz**
Class of emission	**F3EJN**
Transmitting antenna site name	**VICTORIA**
Coordinates of the transmitting antenna site	**55°27'41"E - 4°37'57"S**
Power delivered to the antenna	**14 dBW**
Effective radiated power	**17 dBW**
Maximum Gain relative to a half wave dipole	**3 dB**
Call Sign	**S7A70**
Antenna directivity	**Omnidirectional**

Several **base stations** using the same frequency and the same technical parameters in your country

927.8 MHz
927.8 MHz
927.8 MHz
927.8 MHz
927.8 MHz
927.8 MHz
927.8 MHz
927.8 MHz
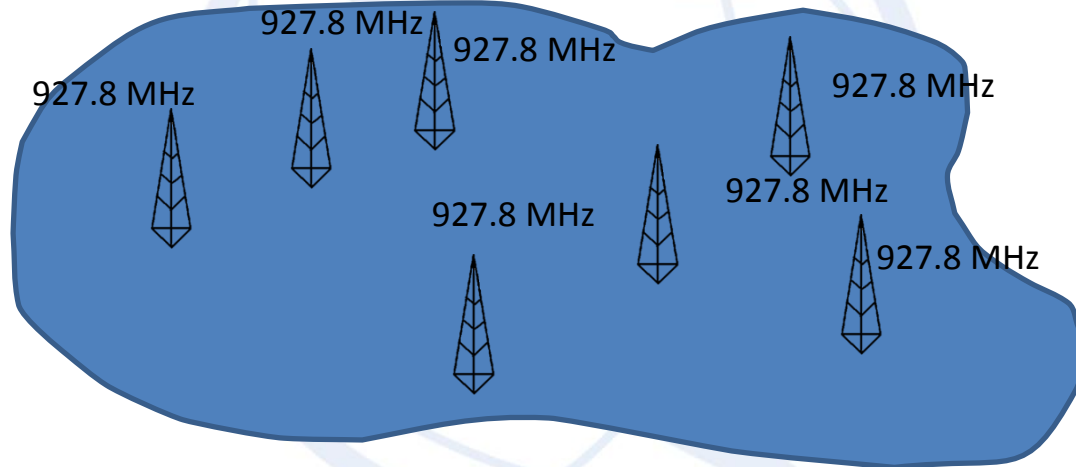
T14 Notice Type
Class of station: FB

FXM 05: Typical transmitting station

Prepare an electronic notice, for the recording in the Master Register of frequency **927.8 MHz** used by **several base stations** in your country using the information below.

Frequency assignments having the same technical characteristics operating within a given area can be notified in a single notice as a typical transmitting station under (RR.11.17). This provision does not apply to all service types (see RR 11.18-11.21B)

To prepare this notice we will use the "Wizard" functionality of TerRaNotices.

Necessary Bandwidth	200 kHz
Class of emission	G7W--
Transmitting geographical area	Enter the country code to notify
Nature of service	Preface Chapter IV, Section 7
Date of bringing into use	Maximum 3 months in advance
Address code	Preface Chapter IV, Section 3
Power to the antenna	10 dBW
Radiated Power	25 dBW

FXM 06: Modifying a frequency assignment

Prepare an electronic notice to modify a frequency assignment which is already recorded in the Master register from your country.

For this exercise, we will select BR Assigned ID No 104006609 in order to Modify the Assigned Frequency 6.92 GHz to 6.892 GHz
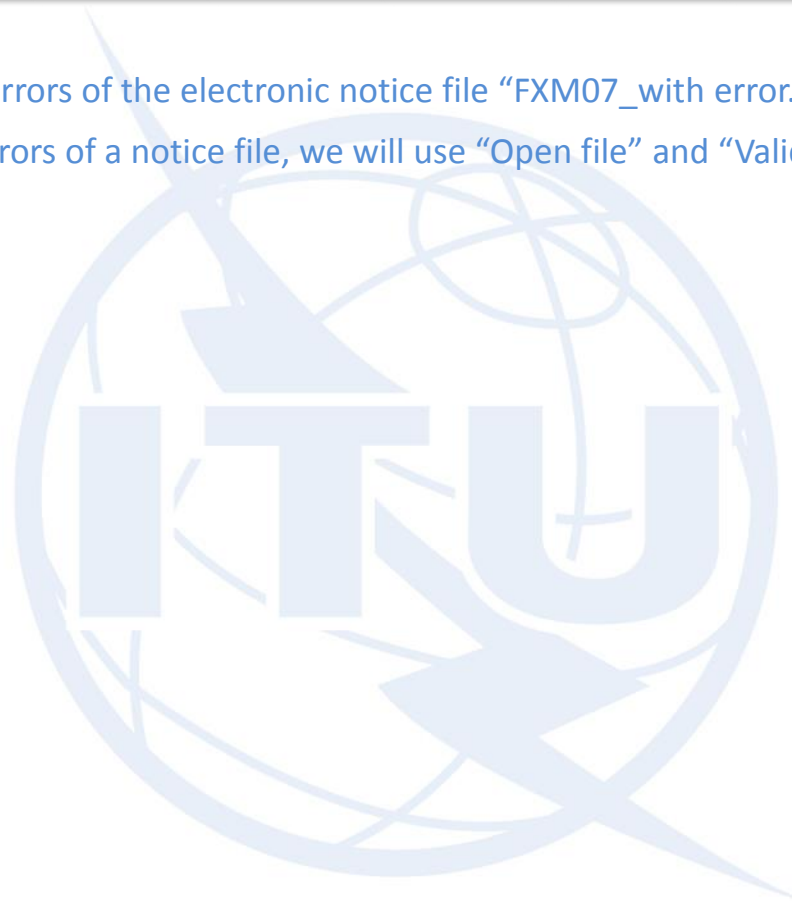
To prepare this notice we will use "Open a Notice from the database" functionality of TerRaNotices.
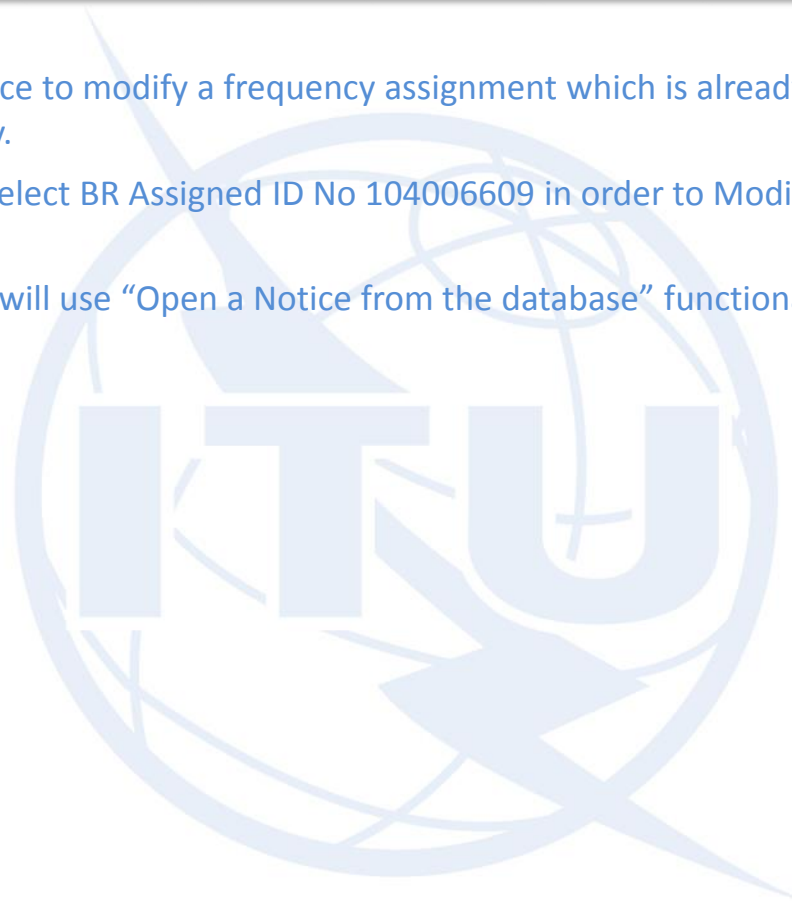
Validate and identify the errors of the electronic notice file "FXM07_with error.txt".

To Validate and identify errors of a notice file, we will use "Open file" and "Validate Notice" functionalities of TerRaNotices.
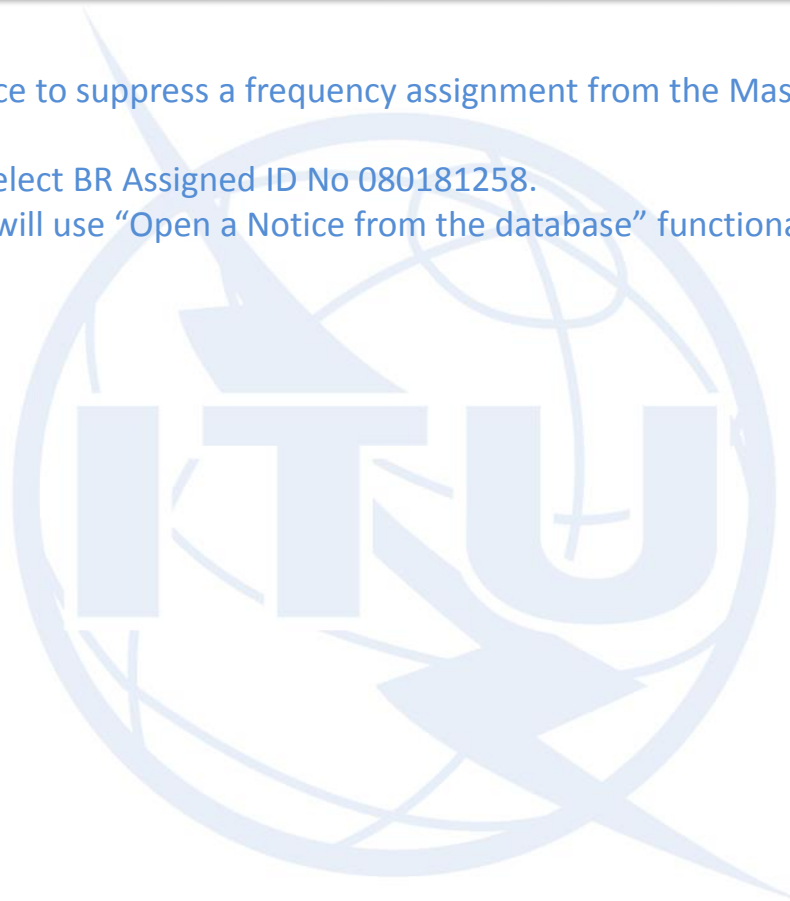
FXM 08: Suppress a frequency assignment

Prepare an electronic notice to suppress a frequency assignment from the Master Register, which is no longer in operation.

For this exercise, we will select BR Assigned ID No 080181258.

To prepare this notice we will use "Open a Notice from the database" functionality of TerRaNotices.

Thank you for

your attention!

ITU – Radiocommunication Bureau
Questions to brmail@itu.int or brtpr@itu.int