

International Telecommunication Union



ITU

ITU REGIONAL
RADIOCOMMUNICATION
SEMINAR FOR ASIA-PACIFIC

**MANILA, PHILIPPINES
25-30 MAY 2015**

www.itu.int/go/ITU-R/seminars



Organized by:

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

*ITU – Radiocommunication Bureau
Ms. Sujiva Pinnagoda
pinnagoda@itu.int
BR/TSD/TPR*

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

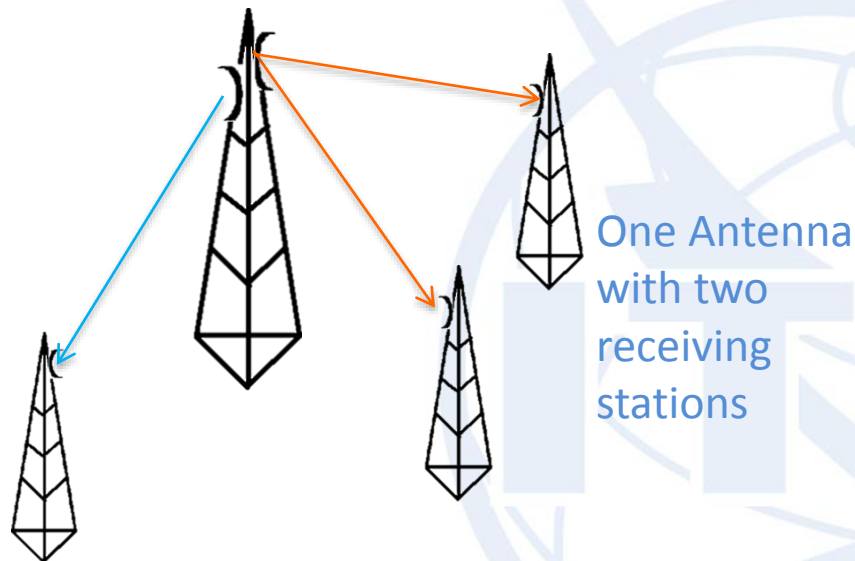
Guidelines on the preparation of notices: Fixed and Mobile Services

- 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 one
receiving
station

One Antenna
with two
receiving
stations

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/WRS-14/Pages/default.aspx>

- TerRaNotices

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



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



T11 Notice Type
Class of station: FX

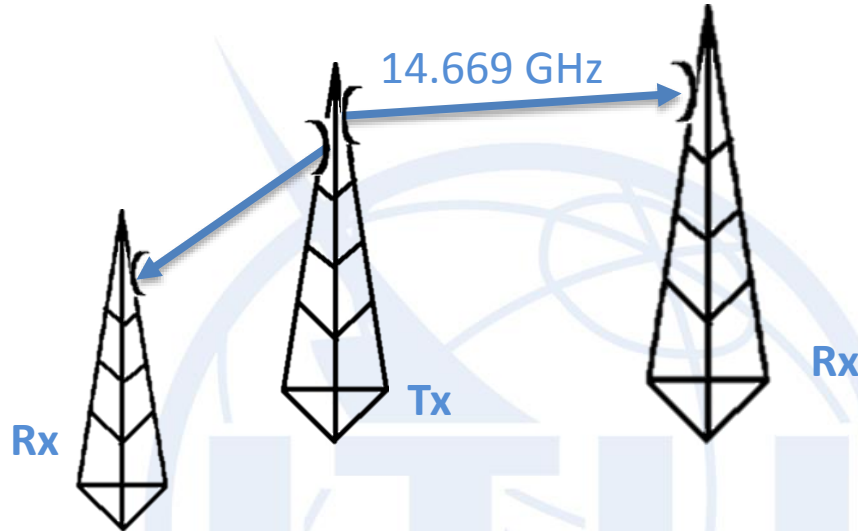
FXM 01: Fixed service (point-to-point)

Prepare an electronic notice of frequency **15.23100 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 **Philippines (PHL)** as the notifying administration and “**FX**” for class of station.


Class of Emission	D7W--
Bandwidth	28 MHz
Transmitting antenna site name	MANILA
Coordinates of the transmitting antenna site	121°00'00"E - 14°36'00"N
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
Antenna	
Antenna directivity	Directional
Beamwidth	0.8°
Azimuth of maximum radiation	150°
Effective radiated power	31.2 dBW
Power delivered to the antenna	-11 dBW
Maximum Gain relative to a half wave dipole	42.2 dB
Name of the location of the receiving station	TAGUIG
Coordinates of the receiving station	121°03'02"E - 14°30'52"N

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



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.

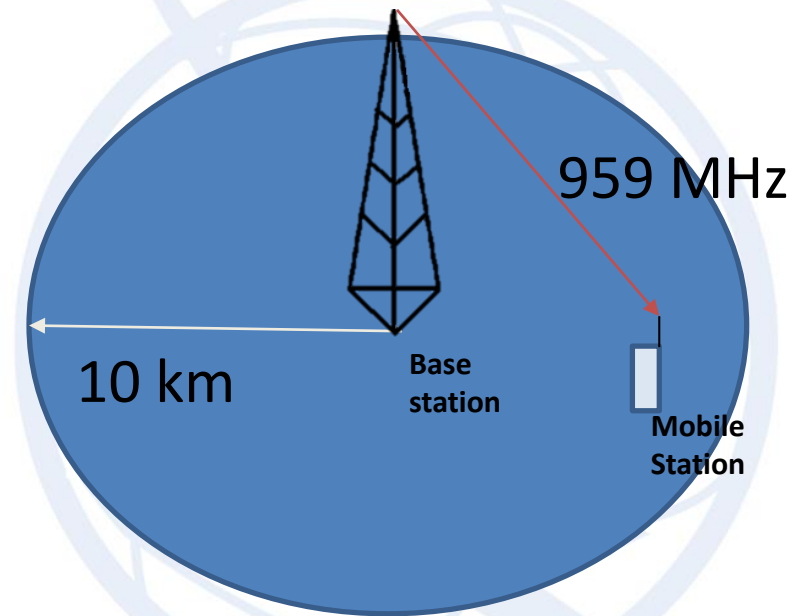
To prepare this notice we will use the “New File” functionality of TerRaNotices and the functionality to add many antennas to a single notice. We will select the administration of **Malaysia (MLA)** as the notifying administration.

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	PASIR GUDANG
Coordinates of the transmitting antenna site	103°54'23"E - 1°30'06"N
Altitude of site above sea level	33 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	155.6°
Beamwidth	1.5°
Polarization	Vertical
Elevation angle	5°
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	RUSA
Coordinates of the receiving station	103°54'38"E - 1°29'33"N
Antenna 2	
Height of the Antenna above ground level*	30 m
Antenna directivity	Directional
Azimuth of maximum radiation	304°
Beamwidth	1.5°
Polarization	Horizontal
Elevation angle*	4°
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	U Tiram
Coordinates of the receiving station	103°49'13"E - 1°33'35"N

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

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

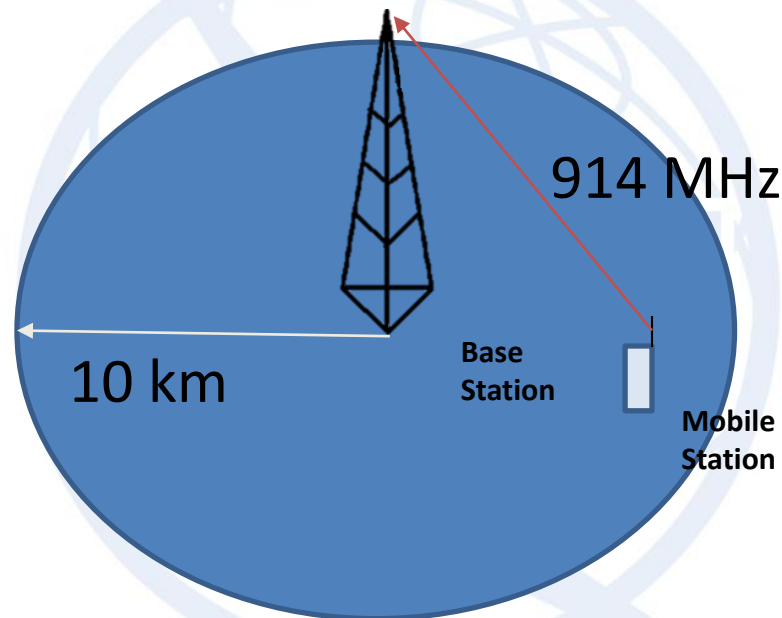
1. Prepare an electronic notice file of frequency **959.000 MHz** assigned to a **base station** having a circular receiving area of a radius of 10 km for the Administration of **Thailand THA**, for its recording in the **Master Register**.

Bandwidth	200 kHz
Class of emission	G7W--
Transmitting antenna site name	BANGKOK
Location of transmitting station	100°30'00"E - 13°40'00"N
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 THA 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

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

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



An area to point in the Land mobile service:



T13 Notice Type
Class of station: ML

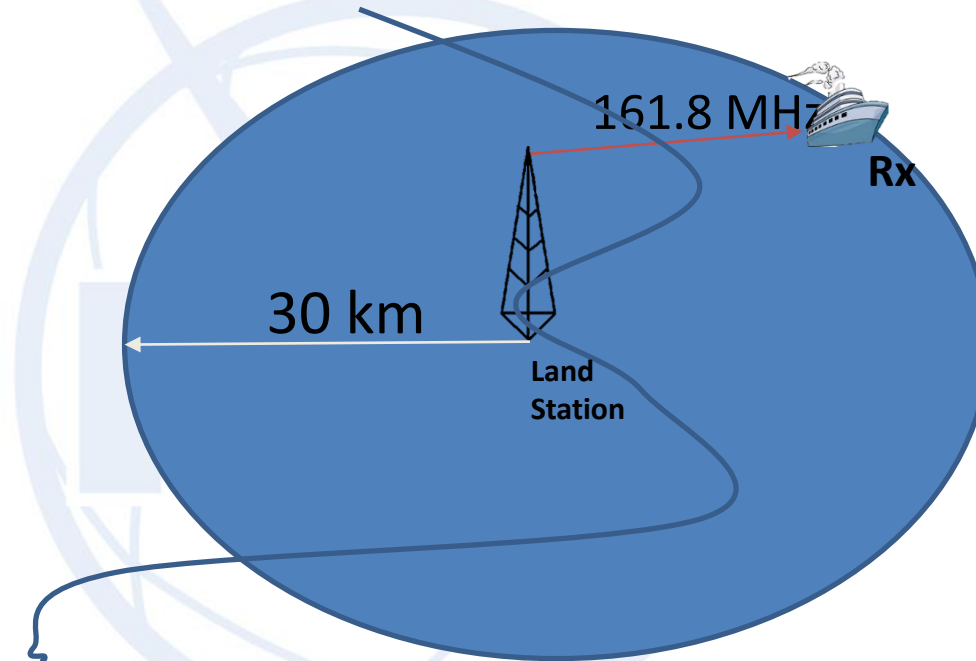
FXM 03: Land mobile service (area-to-point)

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	BANGKOK
Coordinates of the receiving station	100°30'00"E - 13°40'00"N
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

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

Land station in the maritime mobile service



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 Korea (KOR) having a circular receiving area of a radius of 30 km.

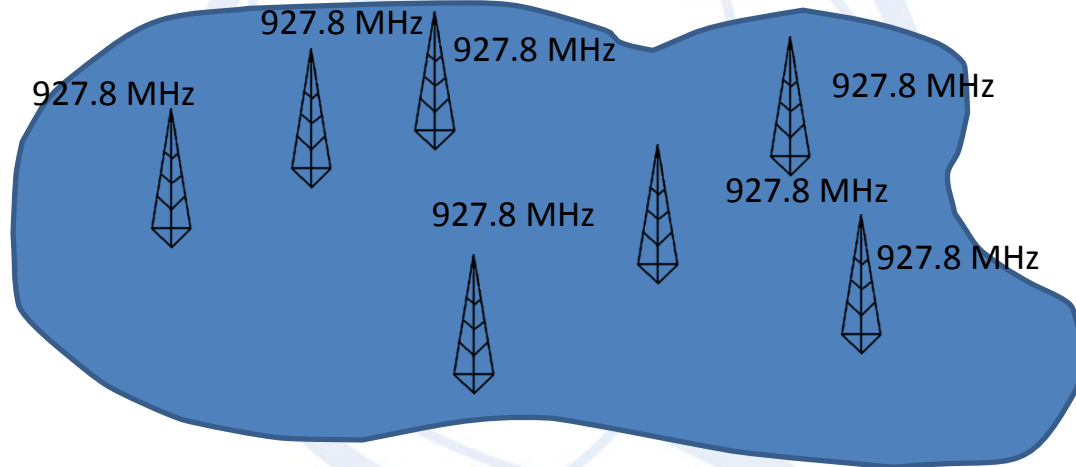
For coast stations, Call sign or Station identification is mandatory. Station identification can be composed of any printable characters (max. 20). However, if Call sign is notified then it shall be in conformity with the provisions of Article 19 and Appendix 42.

To prepare this notice we will use “New Notice” functionality of TerRaNotices and we will select KOR as the notifying administration.

Bandwidth	16 kHz
Class of emission	F3EJN
Transmitting antenna site name	Jeonbuk Miryong dong
Coordinates of the transmitting antenna site	126°41'08"E - 35°57'20"N
Power delivered to the antenna	14 dBW
Effective radiated power	17 dBW
Maximum Gain relative to a half wave dipole	3 dB
Call Sign	DSA70
Antenna directivity	Omnidirectional

FXM 05: Typical transmitting station

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



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.

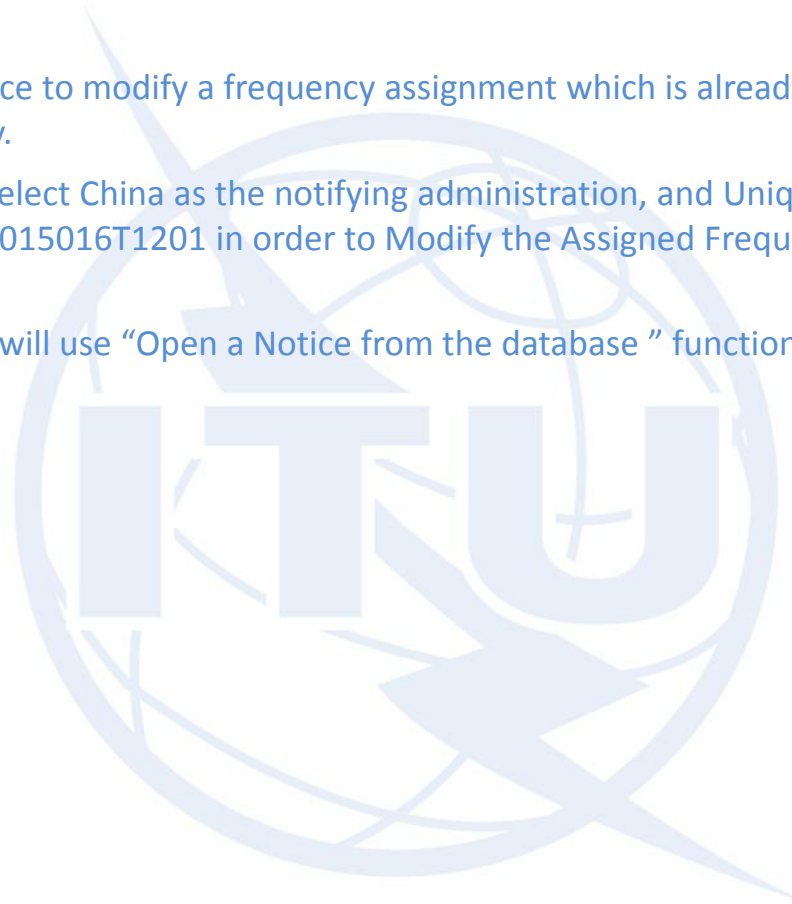
Necessary Bandwidth	200 kHz
Class of emission	G7W--
Transmitting geographical area	Enter the country code to notify
Nature of service	Preface Chapter IV, Section 7
Date of bringing into use	Maximum 3 months in advance
Address code	Preface Chapter IV, Section 3
Power to the antenna	10 dBW
Radiated Power	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 China as the notifying administration, and Unique identification code given by Administration P15222015016T1201 in order to Modify the Assigned Frequency 878.49 MHz to 876.95 MHz

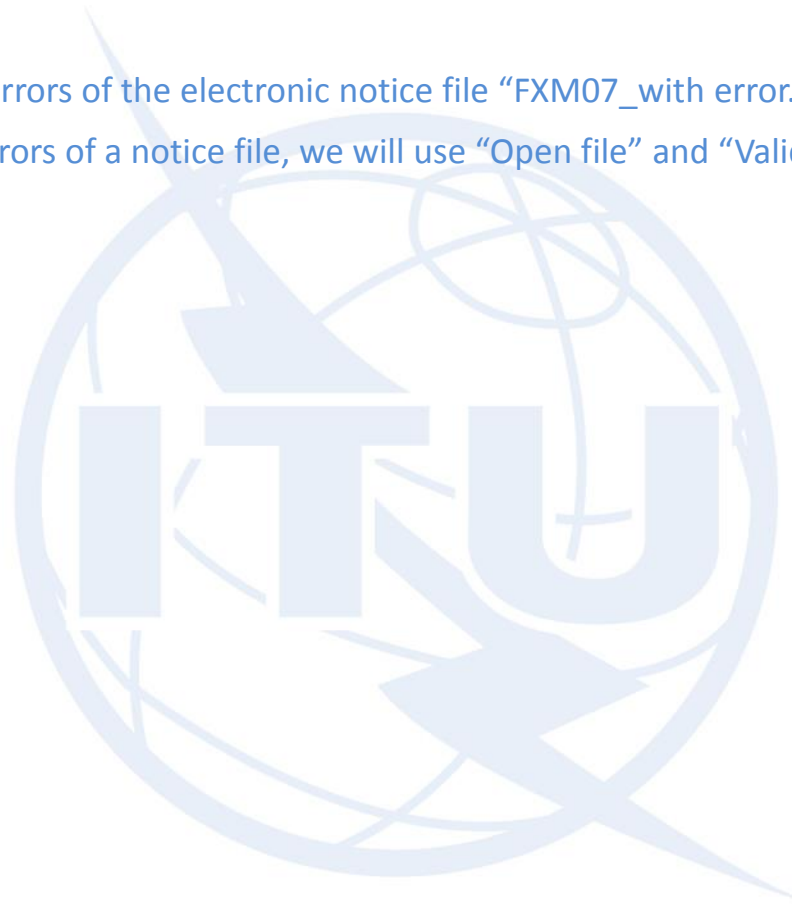
To prepare this notice we will use “Open a Notice from the database ” functionality of TerRaNotices.



FXM 07: Validating and identifying errors of a frequency assignment notice

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.



*Thank you for
your attention!*

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