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

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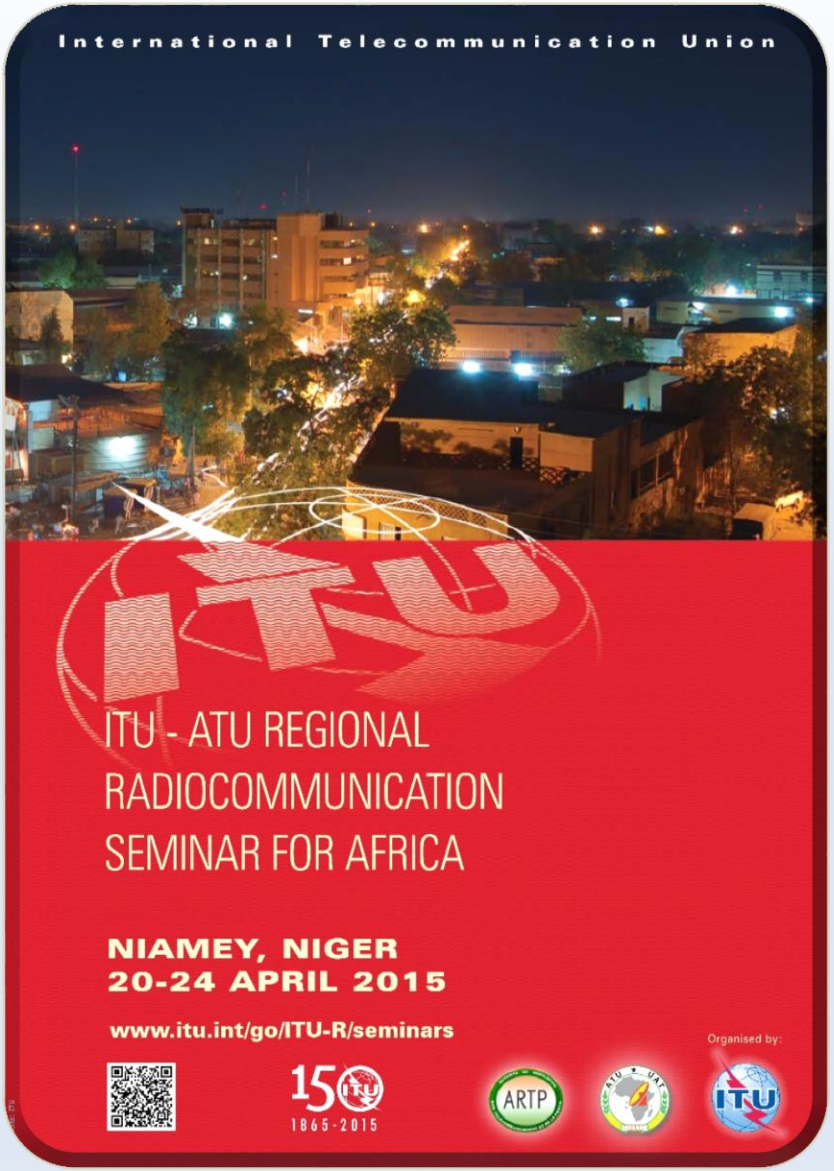


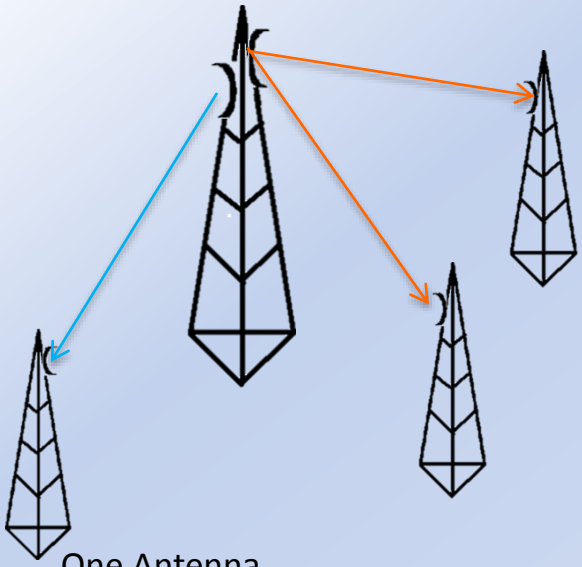
Overview of the Notification workshop on Fixed and Mobile Services

- General guidelines for Fixed and Mobile Services
- Reference documents for notification
- Exercises

General guidelines on the notification process: Fixed and Mobile Services

- Each frequency assignment needs to be uniquely identified;
- Identifying elements for fixed or mobile notices:
  - Frequency, geographical coordinates, class of station, Designation of emission and operating hours;
  - Unique identification code given by the administration.
- These identifying elements enable administrations to submit, at any time, changes to a previously submitted notice;
- A new notice having identical identifying elements of a previously notified frequency assignment will replace it;
- Each notification shall be complete and validated before submitting to the Bureau;
- BR Assign ID and site name are NOT identifying elements but they could be notified in the remarks field, for information;

General guidelines on the notification process: Fixed and Mobile Services



One Antenna with two receiving areas

One Antenna with one receiving station

How to notify a transmitting station with several links?

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

ONE Notice

General guidelines on the notification process: Fixed and Mobile 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 of RR and Appendix 42 to RR;
  - Article 19 Section III – Formation of call sign for the different types of stations.

- Assigned frequencies 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 notice types;

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

- Preface to the BR IFIC;

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

- Radio Regulations.

Exercises

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

Prepare an electronic notice of frequency **10.63 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 **Niger (NGR)** as the notifying administration and "**FX**" for class of station.

Class of Emission	**D7W--**
Bandwidth	28 MHz
Transmitting antenna site name	NIAMEY1
Coordinates of the transmitting antenna site	2°10'00"E - 13°30'00"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	1.5°
Azimuth of maximum radiation	78°
Effective radiated power	32 dBW
Power delivered to the antenna	-8 dBW
Maximum Gain relative to a half wave dipole	40 dB
Name of the location of the receiving station	NIAMEY2
Coordinates of the receiving station	2°40'00"E - 13°35'00"N

Exercises

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

Prepare an electronic notice of frequency **18.36 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 **Niger (NGR)** 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	NIAMEY1
Coordinates of the transmitting antenna site	2°10'00"E - 13°30'00"N
Altitude of site above sea level	215 m
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 1	
Height of the Antenna above ground level	20 m
Antenna directivity	Directional
Azimuth of maximum radiation	78°
Beamwidth	1.5°
Polarization	Horizontal
Elevation angle	-0.1°
Maximum antenna gain relative to isotropic antenna	40 dBi
Equivalent isotropically radiated power	30 dBW
Power delivered to the antenna	-10 dBW
Name of the location of the receiving station	NIAMEY2
Coordinates of the receiving station	2°40'00"E - 13°35'00"N
Antenna 2	
Height of the Antenna above ground level	22 m
Antenna directivity	Directional
Azimuth of maximum radiation	120°
Beamwidth	1.5°
Polarization	Vertical
Elevation angle	-0.2°
Maximum antenna gain relative to isotropic antenna	40 dBi
Equivalent isotropically radiated power	30 dBW
Power delivered to the antenna	-10 dBW
Name of the location of the receiving station	NIAMEY3
Coordinates of the receiving station	2°35'00"E - 13°15'00"N

Exercises

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

1. Prepare an electronic notice file of frequency **950 MHz** assigned to a **base station** having a circular receiving area of a radius of 10 km for the Administration of **Niger (NGR)**, for its recording in the **Master Register**.

Bandwidth	200 kHz
Class of emission	G7W--
Transmitting antenna site name	NIAMEY
Location of transmitting station	2°10'00"E - 13°30'00"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

2. Prepare an electronic notice file of frequency **905 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	NIAMEY
Coordinates of the receiving station	2°10'00"E - 13°30'00"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	20 km
Effective radiated power	3 dBW
Antenna directivity	Omnidirectional

To prepare these notices we will first use “New File” functionality of TerRaNotices and then we will use “Insert new notice”. This functionality enables to have more than one notice in a file.

Exercises

FXM 04: Typical transmitting station

Prepare an electronic notice, for the recording in the Master Register of frequency **950 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--
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	30 dBW

Exercises

FXM 05: Maritime mobile Service (point-to-area)
Prepare an electronic notice, for the recording in the Master Register of frequency **8 750.4 kHz** assigned to a **coast station** in **BENIN (BEN)** open to public correspondence and having a circular receiving area of a radius of 300 km.

For coast stations, “Call sign” or “Station identification” is mandatory. Station identification can be composed of any printable character (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 File” functionality of TerRaNotices.

Carrier frequency	8 749 kHz
Bandwidth	2.8 kHz
Class of emission	J3E--
Transmitting antenna site name	ABOMEY CALAVI
Coordinates of the transmitting antenna site	2°22'02"E - 6°20'52"N
Call sign	TYA
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 delivered to the antenna	30 dBW
Antenna directivity	Omnidirectional

Exercises

FXM 06: Modify a frequency assignment

Prepare an electronic notice to modify the geographical coordinates of frequency assignment 10 975 MHz to a fixed station recorded in the Master Register situated in GUINEA (GUI).

Coordinates of the transmitting antenna site	13°31'25"W - 9°40'10"N
New coordinates of the transmitting antenna site	13°34'56"W - 9°36'57"N

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

Exercises

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

Validate and identify the errors of the electronic notice file “FXM07_T11 with error.txt”.
To Validate and identify errors of a notice file, we will use “Open file” and “Validate Notice” functionalities of TerRaNotices.

FXM07_T11 with error.txt

Thank you for

your attention!

ITU – Radiocommunication Bureau

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