



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

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

A poster for the ITU World Radiocommunication Seminar 2014. The top half features a photograph of a fountain in Geneva, Switzerland, with the city and mountains in the background. The bottom half is a solid red background with white text and graphics. The text includes the ITU logo, the event title 'WORLD RADIOCOMMUNICATION SEMINAR 2014', the dates 'GENEVA, 8-12 DECEMBER 2014', and the website 'www.itu.int/go/ITU-R/WRS-14'. There is also a QR code, a '150 1865 2015' logo, and a 'WRS-14' logo.

International Telecommunication Union

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WORLD  
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SEMINAR 2014

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Organised by:

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WRS-14

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# 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



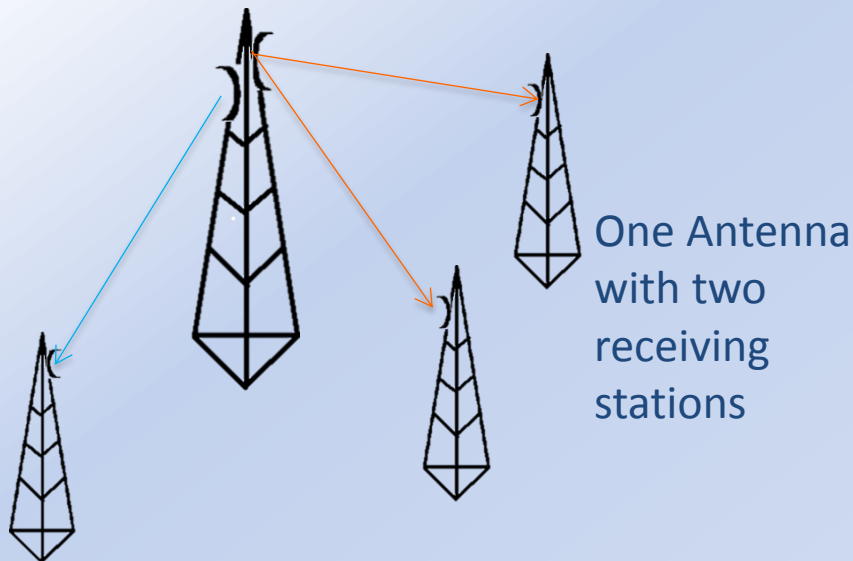
# Guidelines on the preparation of notices: Fixed and Mobile Services

- 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

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>



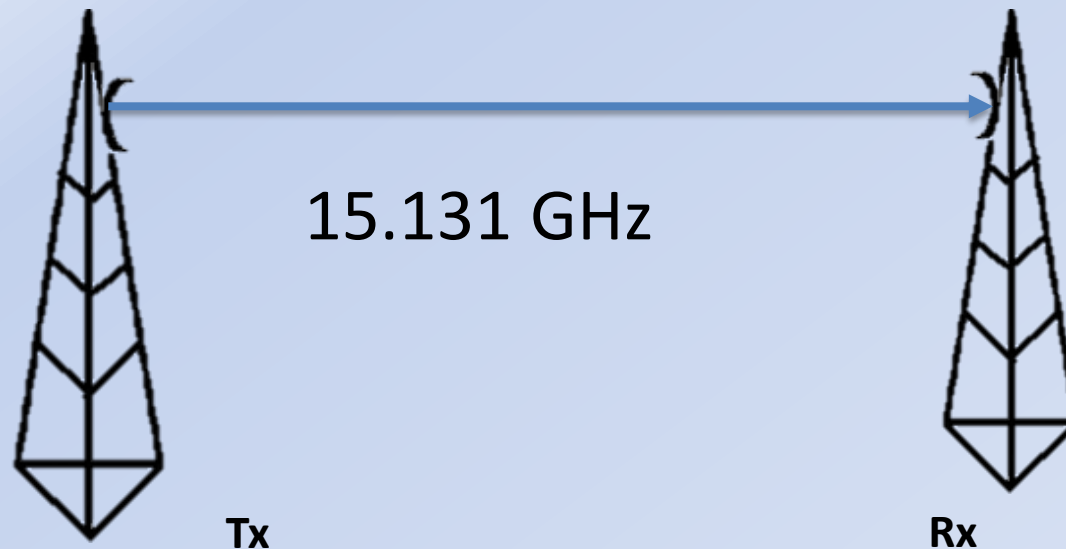
- For the workshop, the following documents are needed:

- 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





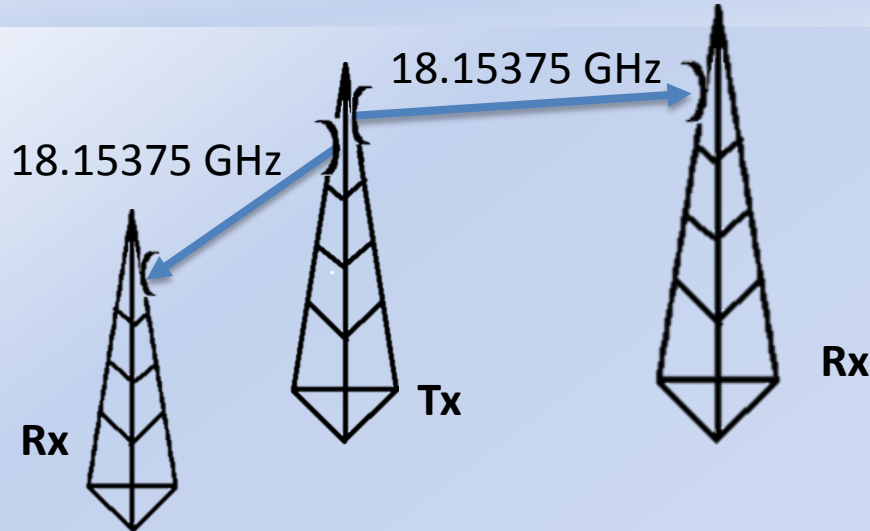
## FXM 01: Fixed service (point-to-point)

To prepare this notice we will use the “Wizard” functionality of TerRaNotices and we will select the Administration of **Argentina (ARG)** as the notifying administration.

Class of Emission	D7W--
Bandwidth	28 MHz
Transmitting antenna site name	FLORENCIO VARELA
Coordinates of the transmitting antenna site	58°16'20"W - 34°48'22"S
Nature of service	Preface Chapter IV, Section 7
Date of bringing into use	Not earlier than 3 months
Address code	Preface Chapter IV, Section 3
<b>Antenna</b>	
Antenna directivity	Directional
Beamwidth	0.8°
Azimuth of maximum radiation	112°
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	BERAZATEGUI
Coordinates of the receiving station	58°11'24"W - 34°50'00"S



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



### Article 5:

18.1 -18.4 Fixed

Fixed-Satellite

(space-to-Earth and Earth-to-space)

Mobile

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 (cont.)

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 **France (F)** as the notifying administration.

Class of Emission	G7WDT
Bandwidth	27.5 MHz
Transmitting antenna site name	St PAUL
Coordinates of the transmitting antenna site	6°39'48"E - 46°22'15"N
Altitude of site above sea level	1140 m
Nature of service	Preface Chapter IV, Section 7
Date of bringing into use	Not earlier than 3 years
Address code	Preface Chapter IV, Section 3
<b>Antenna 1</b>	
Height of the Antenna above ground level	21 m
Antenna directivity	Directional
Azimuth of maximum radiation	254°
Beamwidth	1.3°
Polarization	Horizontal
Elevation angle	-13°
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	ETANG
Coordinates of the receiving station	6°39'13"E - 46°22'8"N

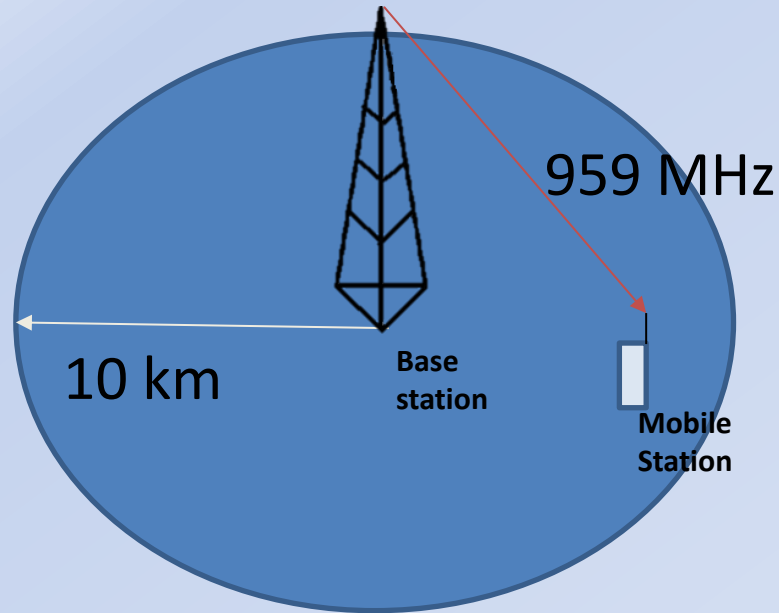


## FXM 02: Fixed service (Point-to-Multipoint) in shared bands (cont.)

Antenna 2	
Height of the Antenna above ground level	22 m
Antenna directivity	Directional
Azimuth of maximum radiation	136°
Beamwidth	1.3°
Polarization	Vertical
Elevation angle	3.2°
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	BERNEX
Coordinates of the receiving station	6°41'49"E - 46°20'49"N

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

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

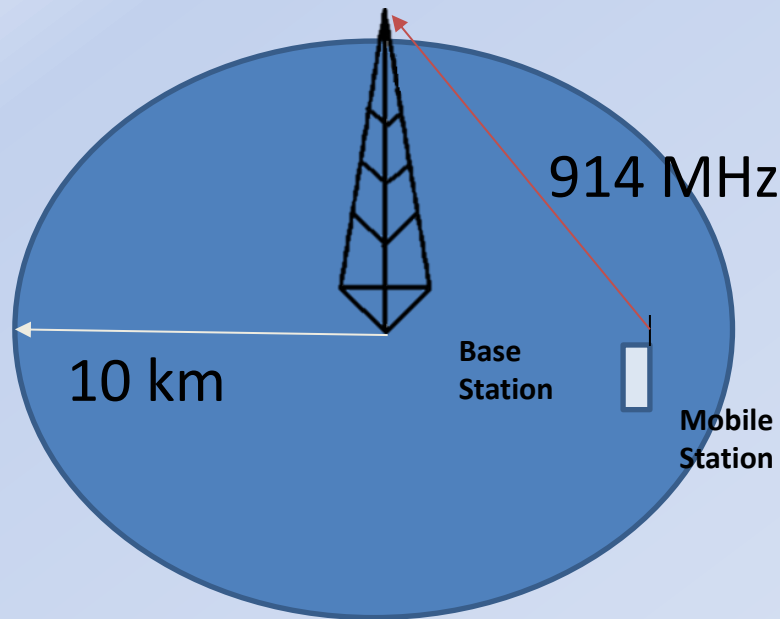


## FXM 03: Land mobile service (point-to-area/area-to-point) (cont.)

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 and we will select the Administration of **Moldova**

<b>Bandwidth</b>	200 kHz
<b>Class of emission</b>	G7W--
<b>Transmitting antenna site name</b>	ZADNI
<b>Location of transmitting station</b>	28°53'34"E - 47°02'29"N
<b>Nature of service</b>	Preface Chapter IV, Section 7
<b>Date of bringing into use</b>	Not earlier than 3 months
<b>Address code</b>	Preface Chapter IV, Section 3
<b>Effective radiated power</b>	30 dBW
<b>Antenna directivity</b>	Omnidirectional

## 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



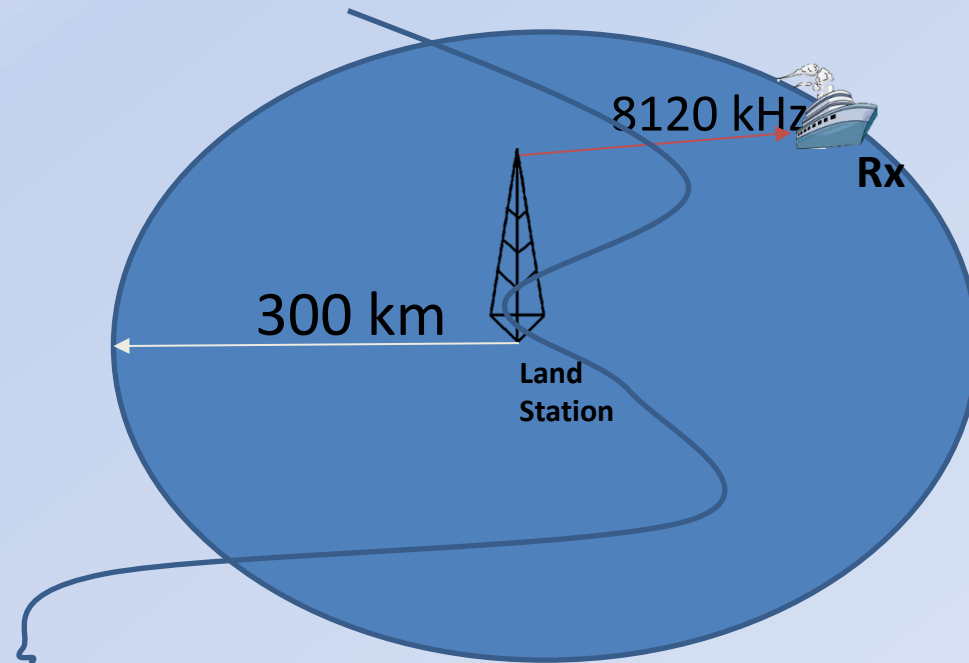
## FXM 03: Land mobile service (point-to-area/area-to-point)

<b>Bandwidth</b>	200 kHz
<b>Class of emission</b>	G7W--
<b>Name of the location of the receiving station</b>	ZADNI
<b>Coordinates of the receiving station</b>	28°53'34"E - 47°02'29"N
<b>Nature of service</b>	Preface Chapter IV, Section 7
<b>Date of bringing into use</b>	Not earlier than 3 months
<b>Address code</b>	Preface Chapter IV, Section 3
<b>Radius</b>	10 km
<b>Effective radiated power</b>	3 dBW
<b>Antenna directivity</b>	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 8120 kHz assigned to a coast station open exclusively to correspondence of a private agency situated **in Netherlands (HOL)** having a circular receiving area of a radius of 300 km.

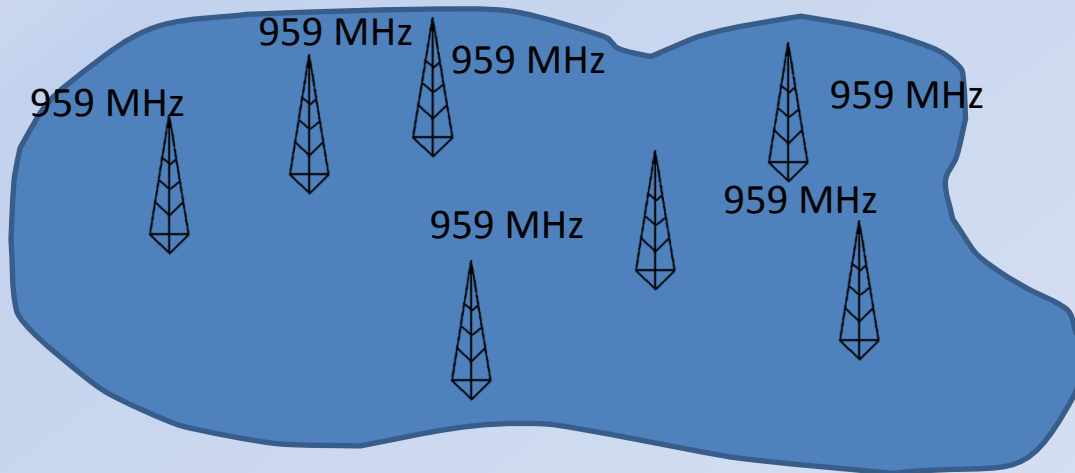
To prepare this notice we will use “New File” functionality of TerRaNotices and select the Administration of

<b>Reference (carrier) frequency</b>	<b>8118.6 kHz</b>
<b>Bandwidth</b>	2.8 kHz
<b>Class of emission</b>	J3E--
<b>Transmitting antenna site name</b>	Zeewolde
<b>Coordinates of the transmitting antenna site</b>	5°27'20"E - 52°21'44"N
<b>Station Identification</b>	<b>ZeewoldeFC01</b>
<b>Nature of service</b>	Preface Chapter IV, Section 7
<b>Date of bringing into use</b>	Not earlier than 3 months
<b>Address code</b>	Preface Chapter IV, Section 3
<b>Power delivered to the antenna</b>	26 dBW
<b>Antenna directivity</b>	Omnidirectional

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.

## 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

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.

<b>Necessary Bandwidth</b>	<b>200 kHz</b>
<b>Class of emission</b>	G7W--
<b>Transmitting geographical area</b>	Enter the country code to notify
<b>Nature of service</b>	Preface Chapter IV, Section 7
<b>Date of bringing into use</b>	Not earlier than 3 months
<b>Address code</b>	Preface Chapter IV, Section 3
<b>Power to the antenna</b>	10 dBW
<b>Radiated Power</b>	25 dBW



## FXM 06: Modify a frequency assignment

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

For this exercise, we will select the Administration of **Latvia (LVA)** as the notifying administration, and Unique identification code given by Administration **081ML2013** to modify the assigned frequency **407.15 MHz** to **409.250 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](mailto:brmail@itu.int) or [brtpr@itu.int](mailto:brtpr@itu.int)