



## Overview

Cessy Karina

# ITSO/ITU WORKSHOP on Satellite Communications

Afralti, Nairobi

8 - 12 June 2015



150 1865  
ITU 2015



✓ Founded on 17 May 1865



5 Elected Officials



**Mr. François  
Ranczy**  
Director, BR

- ✓ 193 Member States,  
> 700 Sector Members , Associates & Academia
- ✓ 750 staff & 100 nationalities
- ✓ Annual budget = US\$180,000,000

<http://www.itu.int>

## Leading United Nations agency for ICTs



4 regional offices, 8 area offices  
HQ in Geneva, Switzerland



**Radiocommunications**  
- regulations  
- standards

# Structure



**Standardization**

**Development**



# ITU-R history in brief

<b>1906</b> (Berlin)	<b>International Radiotelegraph Convention</b> (1 <sup>st</sup> <i>Radio Regulations</i> )
<b>1927</b> (Washington DC)	<b>CCIR</b> (International Radio Consultative Committee)
<b>1932</b> (Madrid)	Telegraph & Radiotelegraph Conventions merged: the International Telegraph Union became the <b>International Telecommunication Union</b>
<b>1947</b> (Atlantic City)	<b>IFRB</b> (International Frequency Registration Board) ITU as UN specialized agency
<b>1992</b> (Geneva)	<b>ITU-R</b> (Radiocommunication Sector ): <ul style="list-style-type: none"><li>▪ <b>RRB</b> (Radio Regulations Board)</li><li>▪ <b>BR</b> (Radiocommunication Bureau)</li></ul>
<b>2006</b>	 <b>100+ years of ITU <i>Radio Regulations</i></b>



# Roles of ITU-R



**international  
regulations**



**global  
standards  
& guidelines**



**assistance to  
administrations**

- ✓ Rights of access to the spectrum
- ✓ Efficient use of spectrum
- ✓ Operation free from interference
- ✓ Economies of scale
- ✓ Interoperability and roaming
- ✓ Global harmonization
- ✓ Guidelines for national & regional regulations

**GOOD QUALITY  
AND LESS COSTLY EQUIPMENT**

**MORE FAVORABLE INVESTMENT  
ENVIRONMENT (CLEAR & STABLE )**



# ITU-R mission

- To ensure **interference-free operations** of radiocommunication systems by implementing the Radio Regulations and regional agreements, as well as updating these instruments in an efficient and timely manner through the processes of world and regional radiocommunication conferences.
- To establish **Recommendations** intended to assure the necessary performance and quality in operating radiocommunication systems.
- To seek ways and means to ensure the **rational, equitable, efficient and economical use of the radio-frequency spectrum and satellite-orbit** resources and to promote flexibility for future expansion and new technological developments.

## **Role conducted through** *(inter alia):*

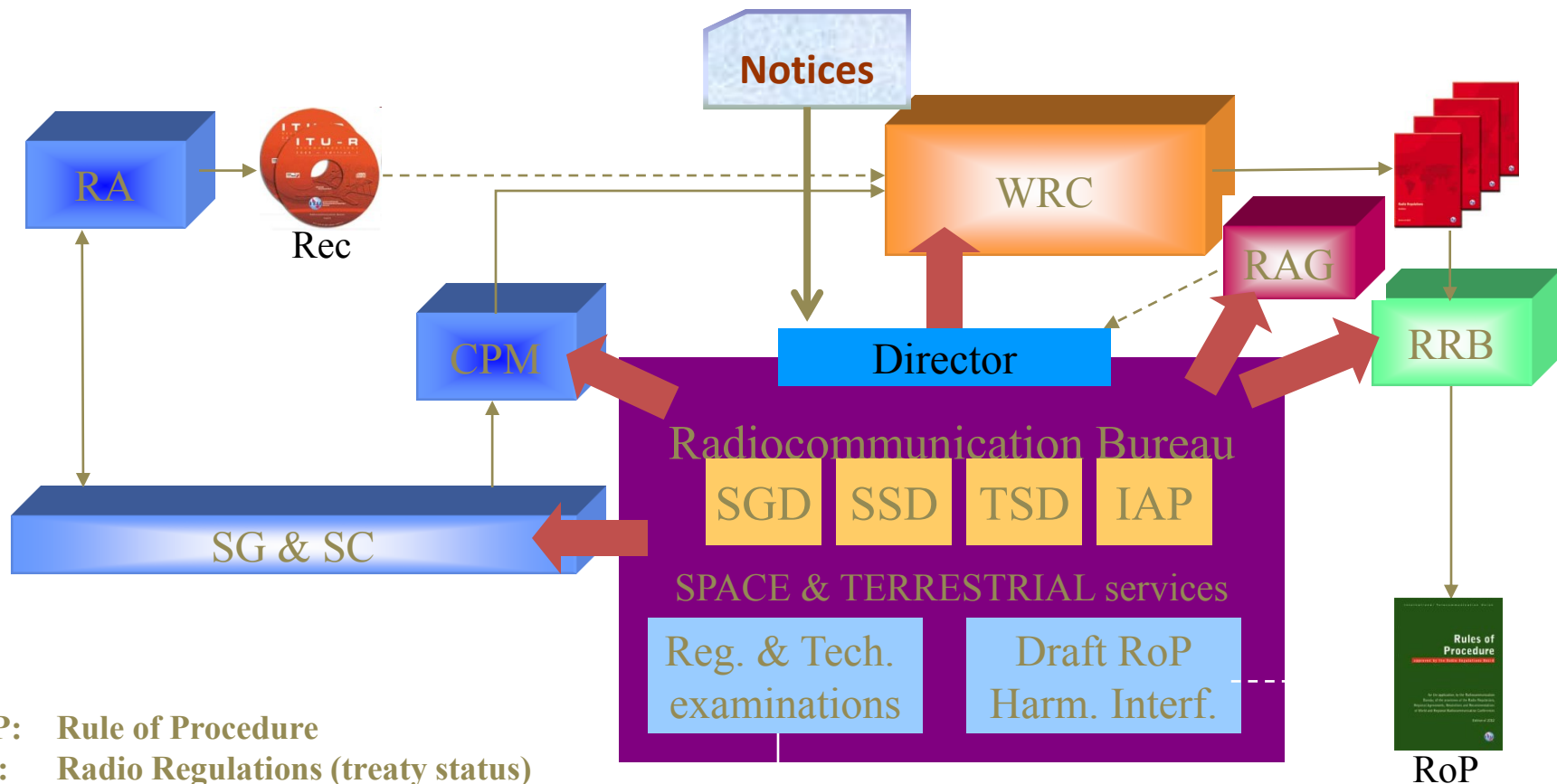
- ✓ World and Regional Radio-communication Conferences
- ✓ Radiocommunication Study Groups
- ✓ Radio Regulations Board
- ✓ Radiocommunication Bureau

In implementing this mission, the actions in ITU-R aim at creating the conditions for harmonized development and efficient operation of existing and new radiocommunication systems, taking due account of all parties concerned.





# ITU-R structure & activities



**RoP:** Rule of Procedure  
**RR:** Radio Regulations (treaty status)  
**RRB:** Radio Regulations Board  
**SG:** Study Group  
**WRC:** World Radiocommunication Conference  
**CPM:** Conference Preparatory Meeting  
**MIFR:** Master International Frequency Register  
**RA:** Radiocommunication Assembly  
**RAG:** Radiocommunication Advisory Group  
**Rec:** Recommendations (international voluntary standards)  
**IFIC:** International Frequency Information Circular



# Radio Regulations (RR)

The Radio Regulations  
(international *treaty*)  
incorporates the decisions of  
the World Radiocommunication  
Conferences, including all  
Appendices, Resolutions,  
Recommendations and  
ITU-R Recommendations  
incorporated by reference.



- Frequency block **allocations** to defined radio services (Article 5)
- Mandatory or voluntary **regulatory procedures** (coordination, plan modification, notification, recording) that are adapted to the allocation structure





## Status

RIGHT for international recognition  
OBLIGATION to eliminate harmful interference  
Art7-8

## Frequency

TABLE  
(9k-275GHz)  
Art4-6

## Interference & monitoring

Art15-16  
App9-10

## Definitions – Art1-3, App14, 42 Administrative

Secrecy/Licences/  
Interception/Identification of stations/  
call signs/Service Publications  
Art 17-20  
**Bureau & RRB** – Art13-14

## Procedures Coordination, Notification & Recording

Art9, 11  
App4-8

## Limits

technical/operational  
Arts21, 22  
Apps1-3

## Services

Aeronautical – Art35-45  
Maritime – Art46-58  
Amateur, broadcasting,  
fixed, radiodetermination,  
standard freq. & time - Art12, 23-29  
App11-13, 16, 19

## Plans

Maritime HF, VHF (App17-18)  
Maritime coast stations (App25)  
Aeronautical (OR) (App26)  
Aeronautical (R) (App27)  
Broadcasting-satellite (App30-30A)  
Fixed-satellite (App30B)

## GMDSS

Art30-34  
App15

**MIFR**  
(register)



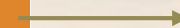
# World Radiocommunication Conference

✓ **Updates the Radio Regulations** (*treaty status*)

- Spectrum Allocation
- Notification procedures
- Administrative and operational procedures

✓ **Adopts Resolutions**

✓ **Held every 3-4 years**



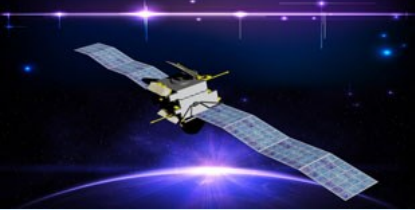
# WRC-15

9 kHz > proposals > 1000 GHz



<http://www.itu.int/ITU-R/go/WRC-15>





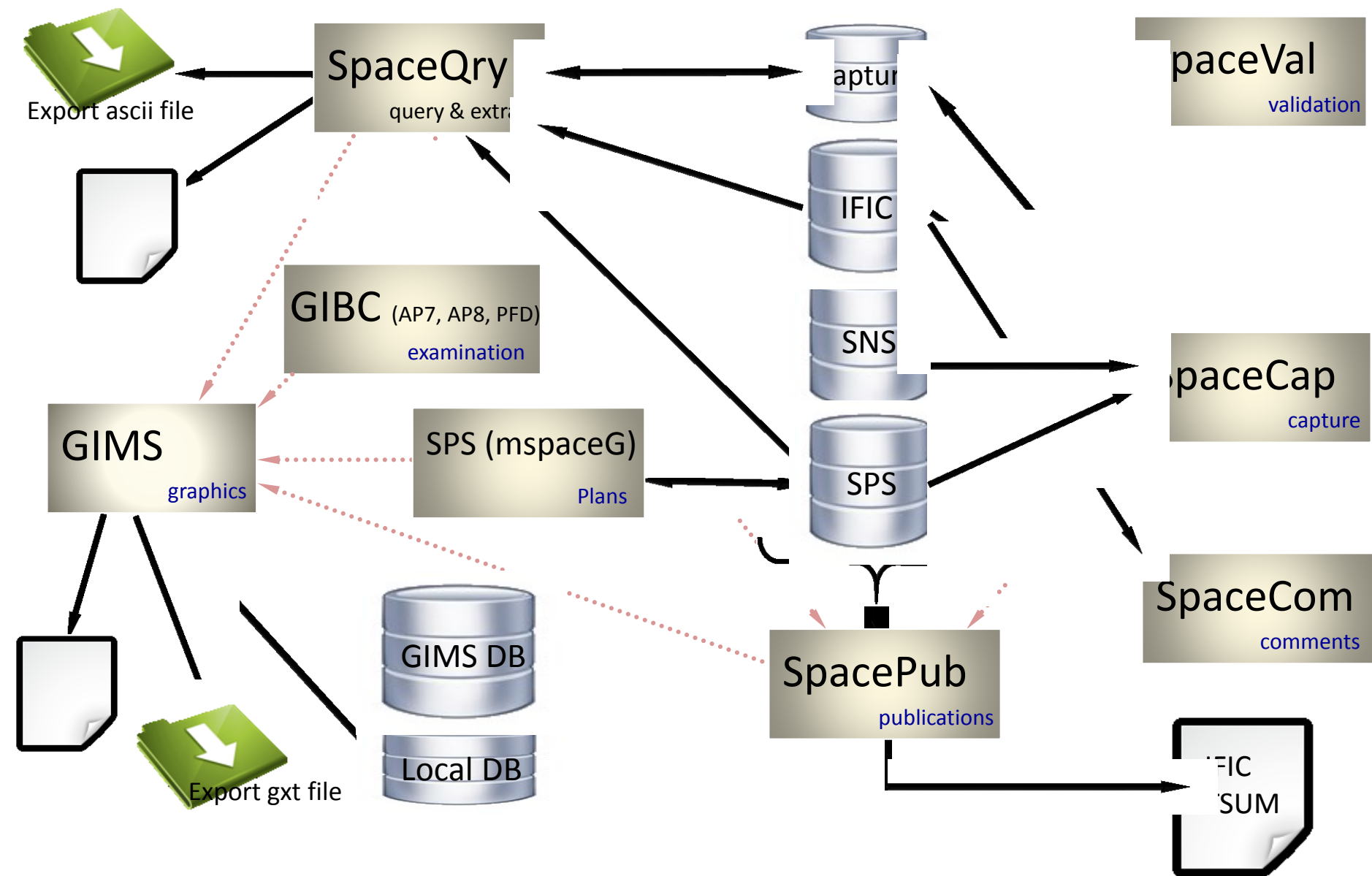
# Space Services

- ✓ *Coordination and recording* procedures for space systems and earth stations: capture, processing and publication of data and examination of frequency assignment notices submitted by administrations for inclusion in the formal coordination procedures or recording in the Master International Frequency Register (MIFR).
- ✓ Procedures for space related assignment and allotment *plans*
- ✓ *Assistance* to administrations on all of the above issues

# Terrestrial Services

- ✓ **Regulatory and Technical Functions**
  - Broadcasting / Fixed and Mobile / Maritime Mobile / Aeronautical Mobile
- ✓ **Terrestrial Plans**
  - AP25, AP26, AP27, ST61, GE75, RJ81, GE84, GE85M, GE85N, RJ88, GE89, GE06
- ✓ **HF Broadcasting (Art.12)**
- ✓ **Administrative and Operational Procedures**
  - International means of identification
    - call sign series / maritime identification digits / blocks of selective call sign numbers
  - Service Documents
    - Ship stations / coast stations / radio determination / call signs / MARS, etc
- ✓ **Harmful interference & monitoring programs**

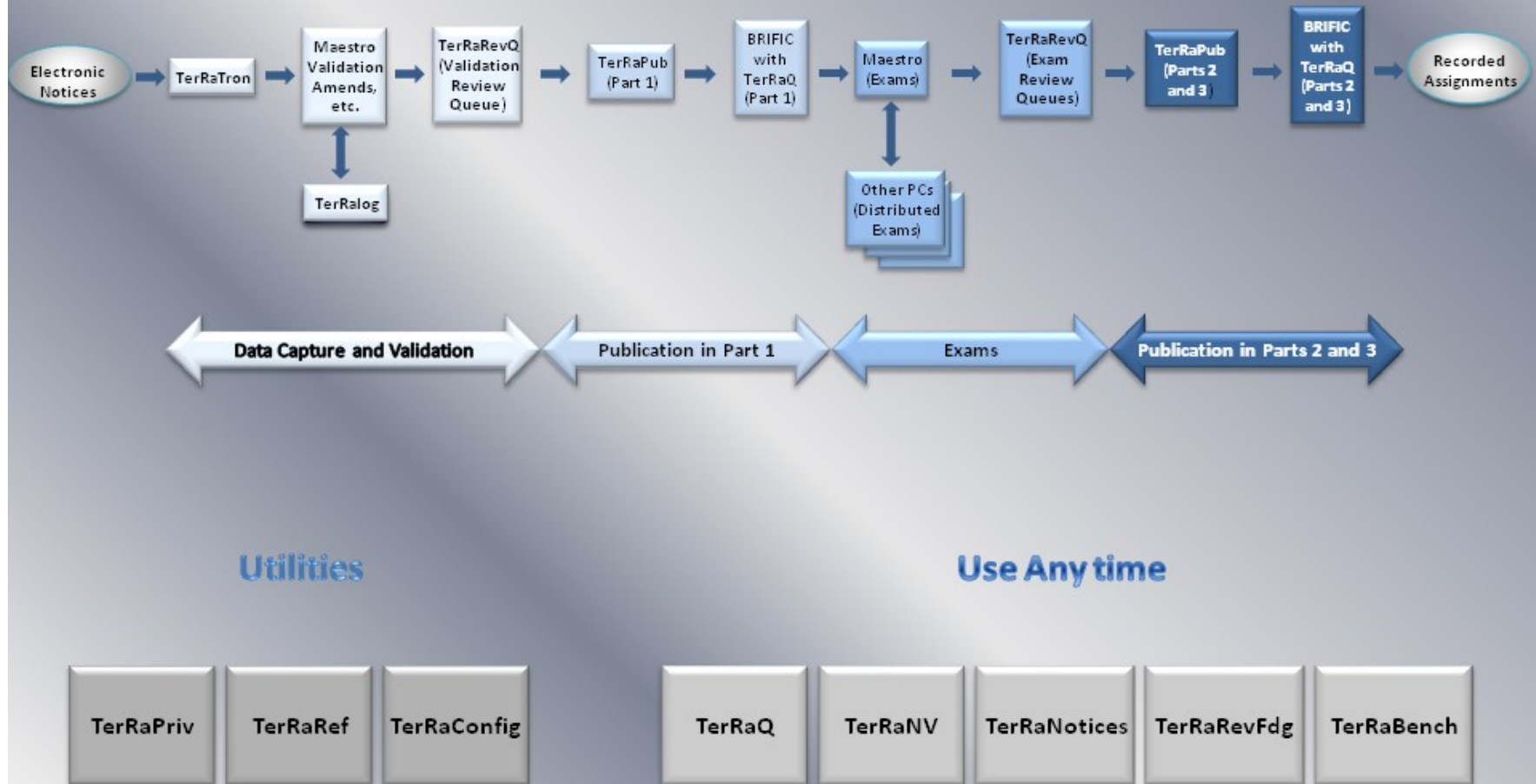
# Space Services Software





# BR Terrestrial Software

## TerRaSys Overview



# ITU-R Study Groups

**SG 1: Spectrum management**  
**SG 3: Radiowave propagation**  
**SG 4: Satellite services**  
**SG 5: Terrestrial services**  
**SG 6: Broadcasting service**  
**SG 7: Science services**



- ✓ **>900 Recommendations**
- ✓ **“Standards” in areas of spectrum management and radio technology**
- ✓ **Result of consensus from meetings of world-wide experts**
- ✓ **Some referred to in RR**
- ✓ **Used by spectrum planners and system designers**

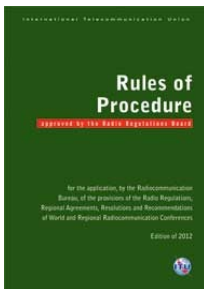
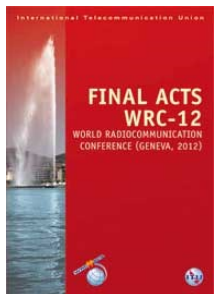
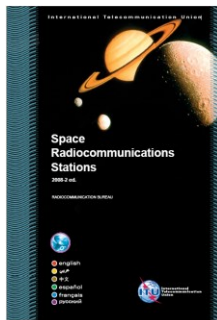
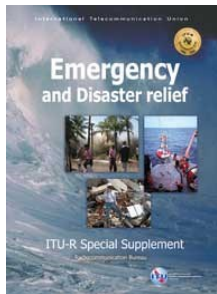
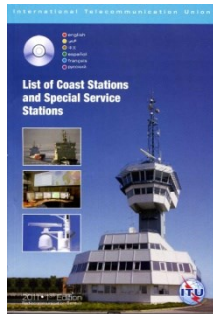
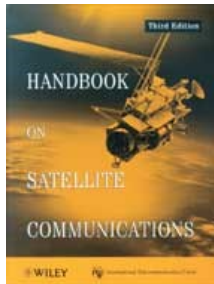
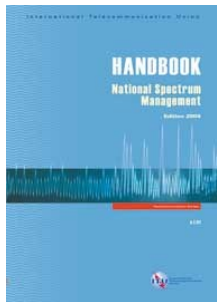
**In addition:**

**CCV: Coordination Committee for Vocabulary**

**CPM: Conference Preparatory Meeting**

**SC: Special Committee on regulatory and procedural matters**

# ITU-R Publications



- Radio Regulations (RR)
- Service documents
  - e.g., BR International Frequency Information Circular (IFIC)
- ITU-R Recommendations
  - Online subscriptions
  - CD/DVD-ROM
  - Paper
- Handbooks & Reports





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Radiocommunication

Standardization

Development

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## ITU Radiocommunication Sector

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### WRS-12

ITU World Radiocommunication Seminar 2012  
Geneva, 3-7 December 2012

[More](#)

[Elements](#) [Highlights](#)

- World Radiocommunication Conferences (WRC)
- Radiocommunication Assemblies (RA)
- Radio Regulations Board (RRB)
- Study Groups (SGs)
- Radiocommunication Advisory Group (RAG)

[Meetings](#)
[Conferences](#)
[Seminars/Workshops](#)

SG 5 - Confirmed

2012-11-19 - 2012-11-20 GENEVA, SWITZERLAND

JTG 4-5-6-7 - Confirmed

2012-11-21 - 2012-11-28 GENEVA, SWITZERLAND

WRS-12 - Confirmed

2012-12-03 - 2012-12-07 GENEVA, SWITZERLAND

WP 5D - Planned

2013-01-30 - 2013-02-06 GENEVA, SWITZERLAND

RRB-13.1 - Confirmed

2013-03-18 - 2013-03-22 GENEVA, SWITZERLAND

1 - 5

[More Events](#)

### QUICK LINKS

[Radiocommunication Sector \(ITU-R\)](#)
[Intersector Activities](#)
[Other information](#)
[Publications](#)
[Recommendations](#)
[Circulars](#)
[WRC-12 Final Acts](#)

### SPACE SERVICES


[BRIFIC](#)
[SNL](#)
[SNS](#)
[Space Plans](#)

International coordination, notification and recording procedures for **space systems and earth stations** and examination of frequency assignment notices submitted by Administrations (Membership) for inclusion in the **Master International Frequency Register (MIFR)**.

Manages procedures for space-related ITU assignment or allotment plans for launching of satellites.

### TERRESTRIAL SERVICES


[BRIFIC](#)
[GLAD](#)
[MARS](#)
[WISFAT](#)

International coordination, notification and recording procedures for **terrestrial systems** and examination of frequency assignment notices submitted by Administrations (Membership) for inclusion in the **Master International Frequency Register (MIFR) and Plans**.

Application of administrative procedures dealing with allocation of international means of identification (**call sign series, MIDs**) and with safety of life, processing submissions for various service publications and corresponding online information systems.

### RADIOCOMMUNICATION STUDY GROUPS



### RADIO REGULATIONS







# ITU World Radiocommunication Seminar 2014 (WRS-14), 8-12 December 2014, Geneva, Switzerland

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The ITU Radiocommunication Bureau has the pleasure to invite your Administration or organization to attend the ITU World Radiocommunication Seminar 2014 (WRS-14), to be held at ITU Headquarters in Geneva, from 8 to 12 December 2014.

The ITU organizes World Radiocommunication Seminars (WRS) on a biennial basis, in complement to the cycle of Regional Radiocommunication Seminars (RRS). WRS deal with the use of the radio-frequency spectrum and the satellite orbits, and, in particular, with the application of the provisions of the ITU Radio Regulations.

WRS-14 sessions will be organized in two parts, as described here below.

## PLENARY SESSIONS (8-9 DECEMBER 2014)

The first two days will cover the basic concepts related to Spectrum Management both at worldwide and regional levels, as well as the procedures associated to the management of the Master International Frequency Register. These will be followed by the review of:

- ▶ the modifications to the Radio Regulations adopted by the last World Radio Conference (WRC-12),
- ▶ the Agenda of WRC-15.

The programme will also cover the current regulatory framework for the international frequency management and the ITU-R Recommendations and tools regarding the use of spectrum for both terrestrial and space services, including basic training on ICT Tools developed by ITU for frequency notifications and for the technical examinations.

## WORKSHOPS (10-12 DECEMBER 2014)

Workshops will be held during the remaining three days, enabling participants to prepare their own schedule, based on their interest, alternating between space and terrestrial services and between lectures and practical sessions. These workshops will allow the participants to get hands-on experience with ITU notification procedures as well as with the software and electronic publications made available by the Radiocommunication Bureau to the Member States and to the ITU-R Sector Members.

## INTERPRETATION

The lectures and discussions during the Seminar will be held in the six official languages of the ITU (Arabic, Chinese, English, French, Russian, and Spanish) with simultaneous interpretation facilities. The workshops will be held in separate groups in accordance with the language requirements and available facilities.

### Information

### Contacts

### Media

- ▶ [Invitation Letter \(Circular ITU-R CA-217\)](#)
- ▶ [Preliminary programme](#)
- ▶ [Register to the Event through your Designated Focal Point \(DFP\)](#)
- ▶ [List of Registered Participants \[\\(TIES\\)\]\(#\)](#)
- ▶ [Practical Information](#)
- ▶ [Fellowships](#)
- ▶ [Laptop requirements](#)

### WRS ARCHIVES

- ▶ [WRS-12 \(3-7 Dec. 2012\)](#)
- ▶ [WRS-10 \(6-10 Dec. 2010\)](#)
- ▶ [WRS-08 \(8-12 Dec. 2008\)](#)

