

الاتحاد الدولي للاتصالات



الحلقة الدراسية الإقليمية
للاتصالات الراديوية من أجل البلدان العربية

تونس العاصمة، تونس
13-9 ديسمبر 2013

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



ITU and ITU-R

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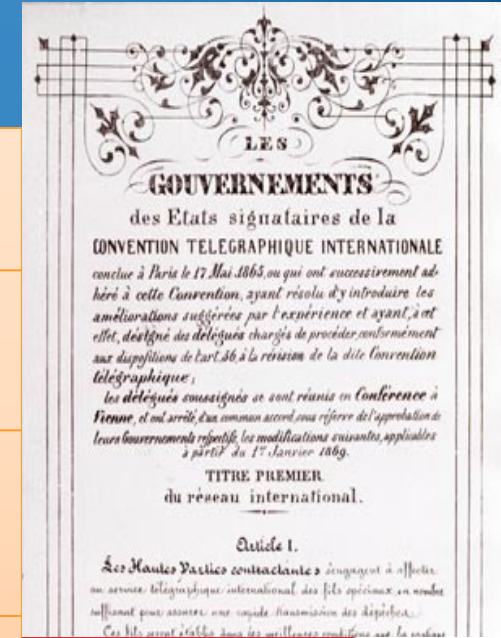
International Telegraph Union

- ✓ 146 years old : founded on 17 May 1865 by 20 nations
 - ✓ common rules to standardize equipment to facilitate international interconnection,
 - ✓ adopted uniform operating instructions which would apply to all countries,
 - ✓ common international tariff and accounting rules.
- ✓ Took ITU name on 1934:
- ✓ Became UN agency on 1947



History of ITU-R in brief

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



International Telecommunication Union

- ✓ membership of 193 countries,
- ✓ 700 private-sector entities and academic institutions
- ✓ 750 staff / 71 nationalities
- ✓ Annual budget = \$140,000,000
- ✓ Website: www.itu.int

United Nations specialized agency for information and communication technologies - ICTs:

- allocate global radio spectrum and satellite orbits,
- develop the technical standards that ensure networks and technologies seamlessly interconnect, and
- strive to improve access to ICTs to underserved communities worldwide.

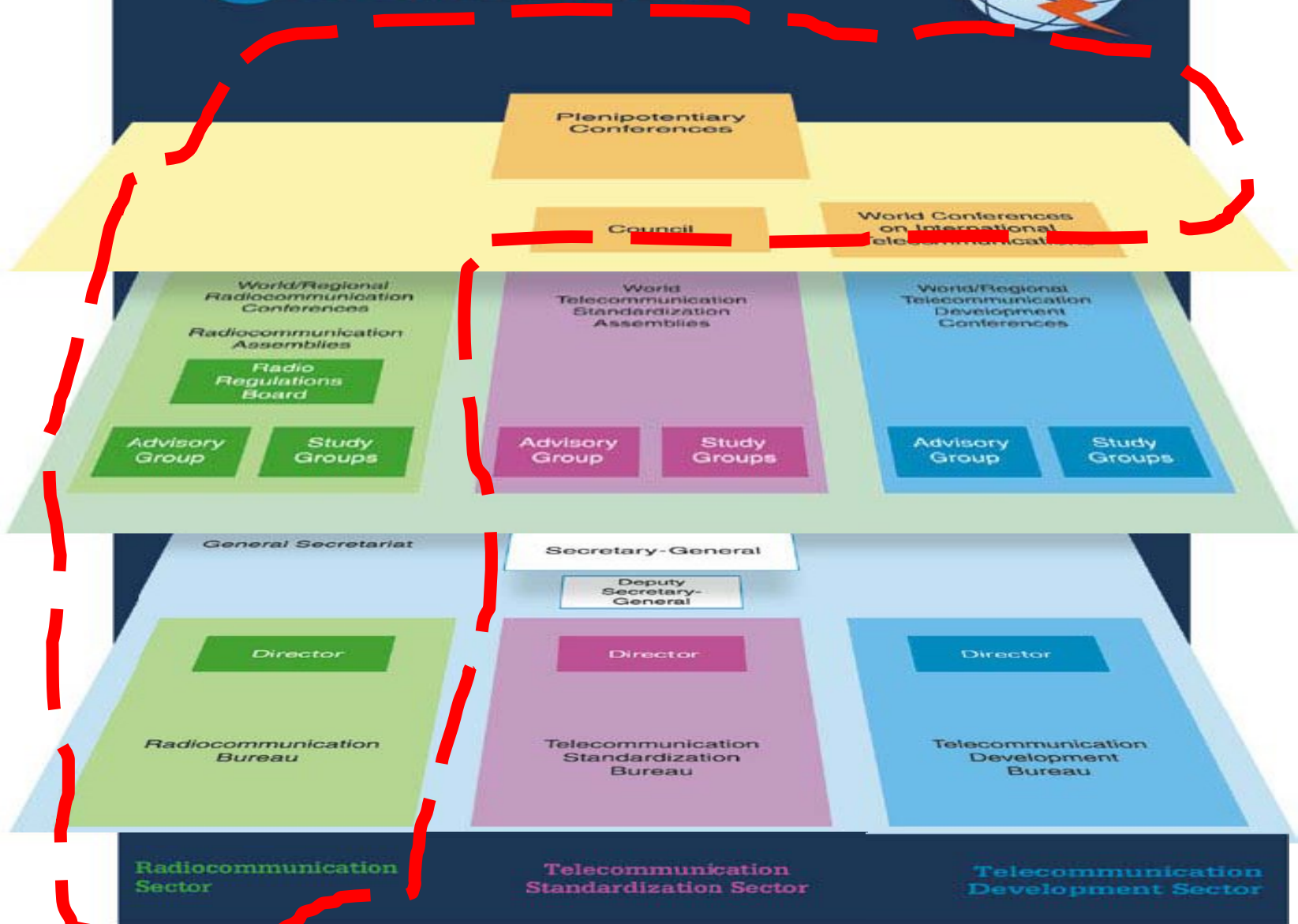


Legal framework

comprises, in particular, the following legal instruments of the Union, which have treaty status:

- **The Constitution:** basic instrument of the International Telecommunication Union, with the object of facilitating peaceful relations, international cooperation among peoples and economic and social development by means of efficient telecommunication services
- **The Convention:** complements the Constitution
- **The Administrative Regulations:**
 - **Radio Regulations;**
 - **International Telecommunication Regulations,** which complement the Constitution and the Convention: establish general principles which relate to the provision and operation of international telecommunication services offered to the public as well as to the underlying international telecommunication transport means used to provide such services. They also set rules applicable to administrations

Structure



Plenipotentiary Conference

- is the **key event at which ITU Member States decide on the future role of the organization**, thereby determining the organization's ability to influence and affect the development of Information and Communication Technologies (ICTs) worldwide.
- is the **top policy-making body** of the ITU.
- **Held every four years**, the Conference:
 - sets the Union's general policies,
 - adopts four-year strategic and financial plans and
 - elects the senior management team of the organization, the members of Council and the members of the Radio Regulations Board.
 - Therefore, establishes a binding, global framework for international telecommunications and set forth the structure of the Union, as well as its diverse and far-reaching activities promoting telecommunications. In addition to the **Constitution and Convention**, the consolidated basic texts include the **Optional Protocol** on the settlement of disputes, the **Decisions, Resolutions and Recommendations** in force, as well as the **General Rules of Conferences, Assemblies and Meetings of the Union**.

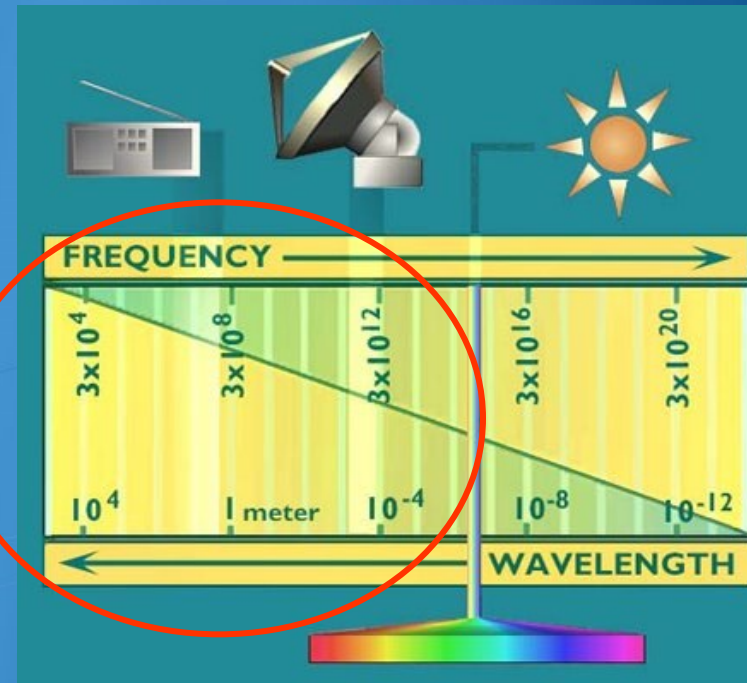
Council

- to consider, in the interval between Plenipotentiary Conferences, broad telecommunication policy issues to ensure that the Union's activities, policies and strategies fully respond to today's dynamic, rapidly changing telecommunications environment.
- is responsible for:
 - preparing a report on the policy and strategic planning of the ITU;
 - ensuring the smooth day-to-day running of the Union, coordinating work programs, approving budgets and controlling finances and expenditure;
 - and finally, for taking all steps to facilitate the implementation of the provisions of the ITU Constitution, the ITU Convention, the Administrative Regulations (International Telecommunications Regulations and Radio Regulations), the decisions of Plenipotentiary Conferences and, where appropriate, the decisions of other conferences and meetings of the Union.

Radiocommunication Sector (ITU-R)

Mission

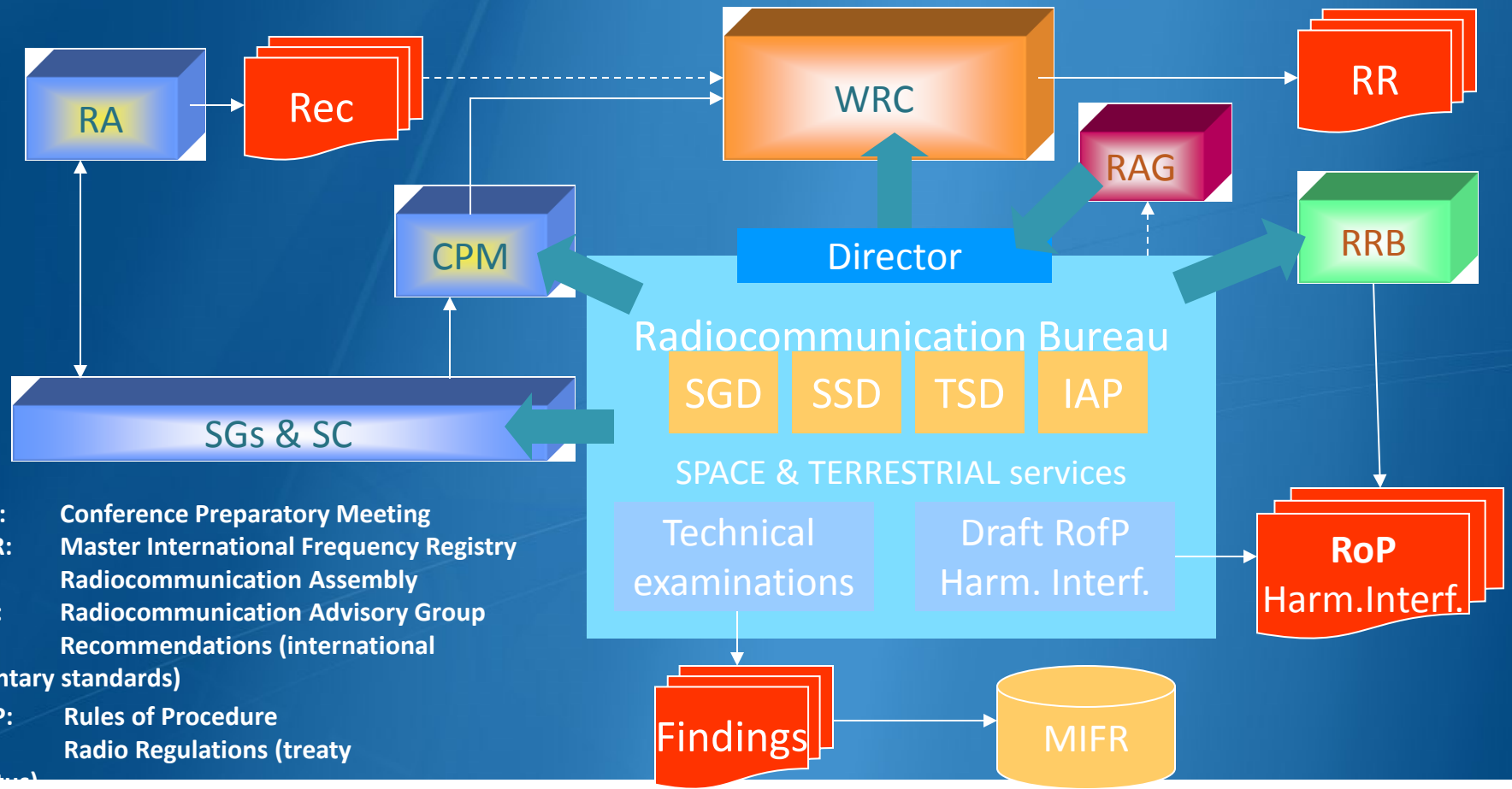
“To ensure rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including those using satellite orbits, and to carry out studies and adopt recommendations on radiocommunication matters.”



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.

Radiocommunication Sector (ITU-R)

Structure & Activities



World Radiocommunication Conferences (WRC)

- ✓ Updates the Radio Regulations (*Treaty status*)
 - Spectrum Allocation
 - Notification procedures
 - Administrative and operational procedures
- ✓ Adopts Resolutions
- ✓ Held every 3-4 years



Radio Regulations (RR)

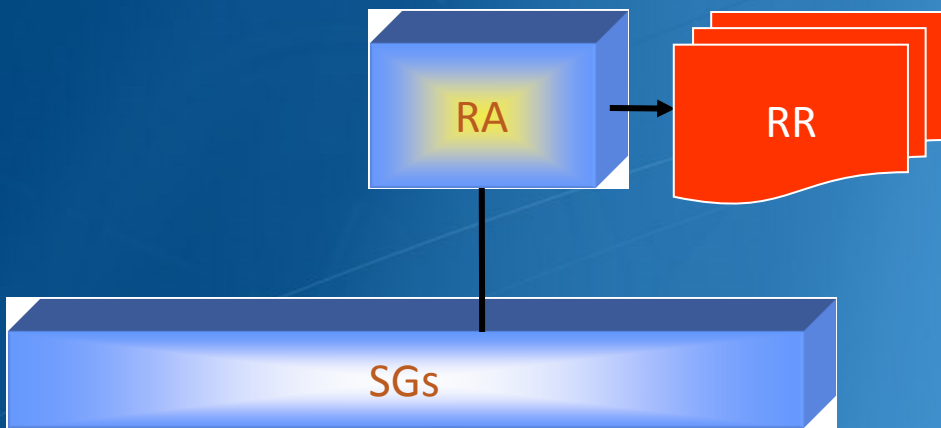
The Radio Regulations (*treaty status*) incorporates the decisions of the World Radiocommunication Conferences, including all Appendices, Resolutions, Recommendations and ITU-R Recommendations incorporated by reference.

- 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



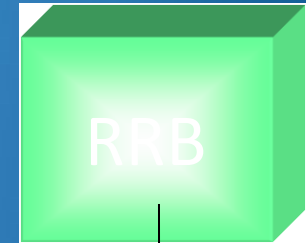
Radiocommunication Assembly (RA)

- ✓ Approves ITU-R Recommendations
- ✓ Adopts a work program for the ITU-R Study Groups
- ✓ Adopts working procedures
- ✓ Held in conjunction with a WRC



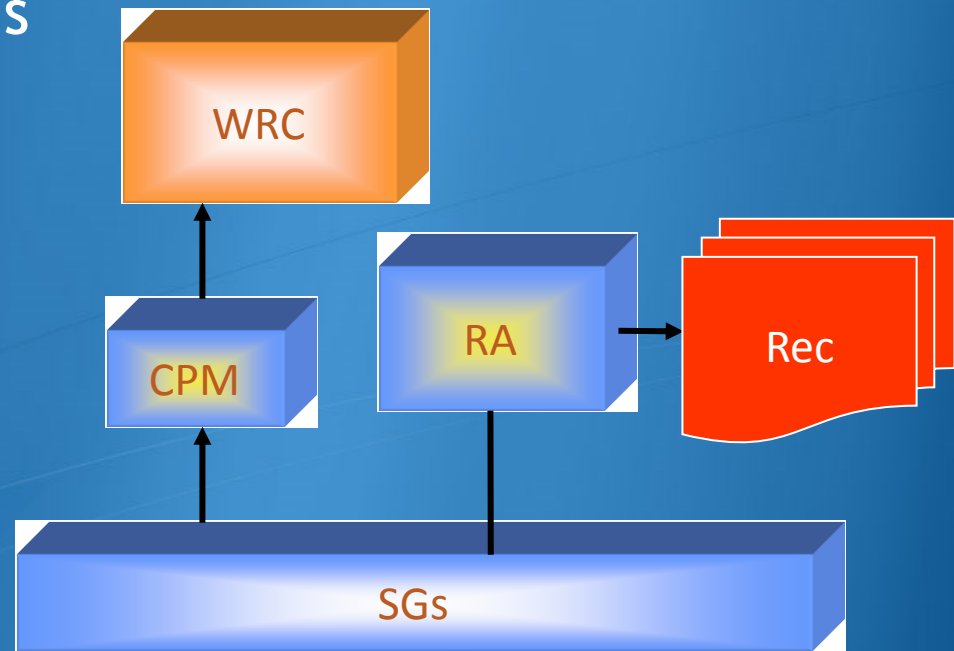
Radio Regulations Board (RRB)

- ✓ Approves Rules of Procedure to facilitate the application of the Radio Regulations
- ✓ Considers cases of harmful interference & appeals against BR decisions on frequency assignment
- ✓ Part-time elected members & 4 meetings/year



Radiocommunication Study Groups (ITU-R SGs)

- ✓ Groups of experts from ITU membership
- ✓ Draft technical bases for WRCs & RRCs
- ✓ Draft Recommendations
 - technical characteristics
 - operational procedures
- ✓ Compile Handbooks



ITU-R Study Groups

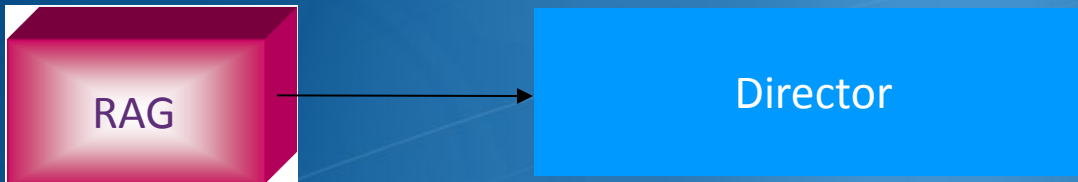
- Study Group 1 (SG 1)
Spectrum management
- Study Group 3 (SG 3)
Radiowave propagation
- Study Group 4 (SG 4)
Satellite services
- Study Group 5 (SG 5)
Terrestrial services
- Study Group 6 (SG 6)
Broadcasting service
- Study Group 7 (SG 7)
Science services



- ✓ >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

Radiocommunication Advisory Group (RAG)

- ✓ Reviews strategies, priorities, operations, finance
- ✓ Provides guidelines to Study Groups
- ✓ Provides advice to the Director
- ✓ Meets once a year



Space Services (www.itu.int/ITU-R/space/)

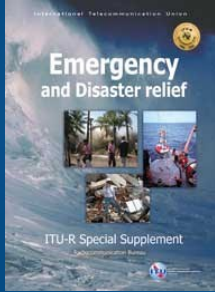
- ✓ *Coordination and recording* procedures for space systems and earth stations: capture, processing and publication of data and examination of frequency assignment notices submitted by administrations for inclusion in the formal coordination procedures or recording in the Master International Frequency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



Terrestrial Services (www.itu.int/ITU-R/terrestrial/)

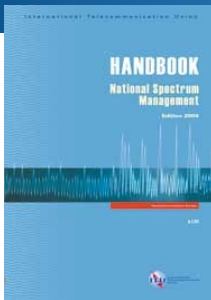
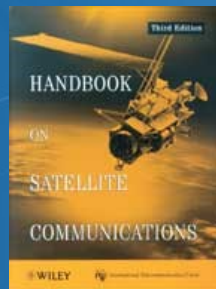
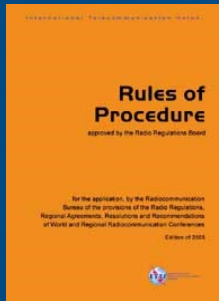
- ✓ **Regulatory and Technical Functions**
 - Broadcasting / Fixed and Mobile / Maritime Mobile / Aeronautical Mobile
- ✓ **Terrestrial Plans**
 - AP25, AP26, AP27, ST61, GE75, RJ81, GE84, GE85M, GE85N, RJ88, GE89, GE06
- ✓ **HF Broadcasting (Art. 12)**
- ✓ **Administrative and Operational Procedures**
 - International means of identification
 - all 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**





BR PUBLICATIONS

- BR International Frequency Information Circular (IFIC)
- Space Radiocommunication Stations on CD-ROM
- Radio Regulations
- Service documents
- ITU-R Recommendations
 - Online subscriptions
 - CD-ROM
 - Paper
- Handbooks



<http://www.itu.int/publications/bookshop/>



Rights and obligations of Member States

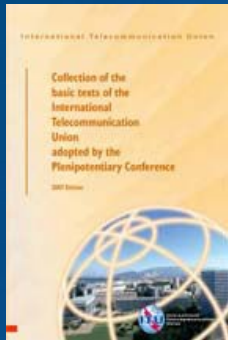
📍 Domain of international frequency management of the spectrum/orbit resource

- 📍 International Telecommunication Constitution (CS) and Convention (CV)
- 📍 CS Article 44 (Geneva, 1992, as amended by PP Kyoto (1994), Minneapolis (1998), Marrakesh (2002) and Antalya (2006))

📍 Radio-frequency spectrum is a limited natural resource that must be used rationally, efficiently and economically, in conformity with the Radio Regulations, so that countries and groups of countries may have equitable access to it

Radio Regulations (RR) —> Specific procedures

- 📍 to ensure international recognition of the frequencies used
- 📍 to safeguard the rights of administrations when they comply with these procedures



Rights and obligations of Member States

● CS, CV and RR

- intergovernmental treaties ratified by governments
- these governments undertake
 - to apply the provisions in their countries
 - to adopt adequate national legislation including the essential provisions of this international treaty.
- oriented mainly towards global or regional matters
- in many areas there is a place for making special arrangements on a bilateral or multilateral basis

Rights and obligations of Member States

● Radio Regulations

- principal instrument of the international radio regulatory arrangement
- based on the use of two main concepts:
 - frequency block allocations intended for use by defined radio services (Table of Frequency Allocations as contained in AR 5)
 - generally provides common frequency allocations to mutually compatible services operating with similar technical characteristics in specific parts of the spectrum
 - stable planning environment for administrations, for equipment manufacturers and for users
 - voluntary or obligatory regulatory procedures (for coordination, notification and recording) that are adapted to the allocation structure

Rights and obligations of Member States

- Level of regulation varies considerably from service to service
 - general provisions applicable to all services
 - provisions applicable specifically to the fixed and the land mobile services
 - maritime mobile and the aeronautical mobile services subject to very detailed international regulations
 - involve broad international use of equipment and practices
 - imply the need to handle relevant operational procedures and technical material in a larger international context



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What would you like to search for?

- ITU
 - General Secretariat
 - Radiocommunication**
 - Standardization
 - Development
 - ITU Telecom
 - Membership
- About Events Databases & Services Publications Space Terrestrial Study Groups Regional Presence Join ITU-R

ITU Radiocommunication Sector

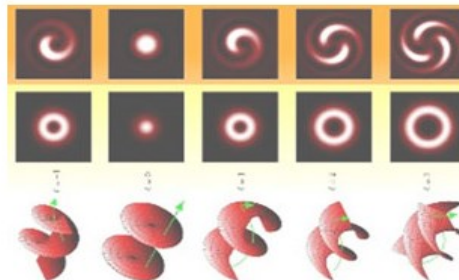
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OAM

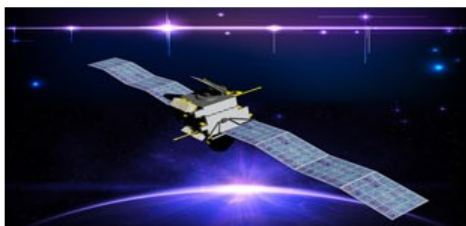
BR witnesses experiment on Radio Orbital Angular Momentum (OAM) with potential for drastic improvement in spectrum efficiency

[More >](#)



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

SPACE SERVICES



- BRIFIC
- SNL
- SNS
- Space Plans

International coordination, notification and recording

TERRESTRIAL SERVICES



- BRIFIC
- GLAD
- MARS
- WISFAT

International coordination, notification and recording

- Meetings
 - Conferences
 - Seminars/Workshops
- WP 5B - Confirmed
2013-11-18 - 2013-11-29 GENEVA, SWITZERLAND
 - RRB-13-3 - Confirmed
2013-11-27 - 2013-12-03 GENEVA, SWITZERLAND
 - SG 5 - Confirmed
2013-12-02 - 2013-12-03 GENEVA, SWITZERLAND
 - WRC-15-IRWSP-13 - Confirmed
2013-12-04 - 2013-12-05 GENEVA, SWITZERLAND
 - SC-WP - Confirmed
2013-12-06 - 2013-12-12 GENEVA, SWITZERLAND

1 - 5

[More Events >](#)

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



ITU and ITU-R

Thank you for
your attention

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