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**ITU-D Regional Development Forum for the Americas Region:
"NGN and Broadband, Opportunities and Challenges"**
Santo Domingo, Dominican Republic, 25-27 November 2009

Role of the Radiocommunication Sector (ITU-R) in Bridging the Digital Divide


Nelson MALAGUTI
Counsellor, ITU Radiocommunication Bureau (BR)
E-mail: nelson.malaguti@itu.int







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Key issues in ITU-R


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- **WRC-12** **World Radiocommunication Conference 2012**
Information Meeting for Africa, Geneva, 14-16.9.09
- **WRC-07** **implementation of results**
Software development: Appendix 30B (FSS Plan)

- **RRC-06** **implementation of results**
Software development: GE06 (BS Digital Plan)

- **IMT-Advanced** **ITU global standard for international mobile telecommunications**

Radio technology [evaluation process](#)
- **Space regulations BR [Workshop](#) on the efficient use of the spectrum/orbit resource, Geneva, 6 May 2009** 

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ITU-R history in brief

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1906 (Berlin)	International Radiotelegraph Convention (1 st <i>Radio Regulations</i>)
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): ▪ RRB (Radio Regulations Board) ▪ BR (Radiocommunication Bureau)
2006	 100 years of ITU Radio Regulations

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ITU-R mission

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*“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** (standards) on radiocommunication matters.”*

International regulatory framework :

- to facilitate equitable access to and rational use of the natural resources of the radio-frequency spectrum and the geostationary-satellite orbit;
- to ensure the availability and protection from harmful interference of the frequencies provided for distress and safety purposes;
- to assist in the prevention and resolution of cases of harmful interference between the radio services of different administrations;
- to facilitate the efficient and effective operation of all radiocommunication services;
- to provide for and, where necessary, regulate new applications of radiocommunication technology.

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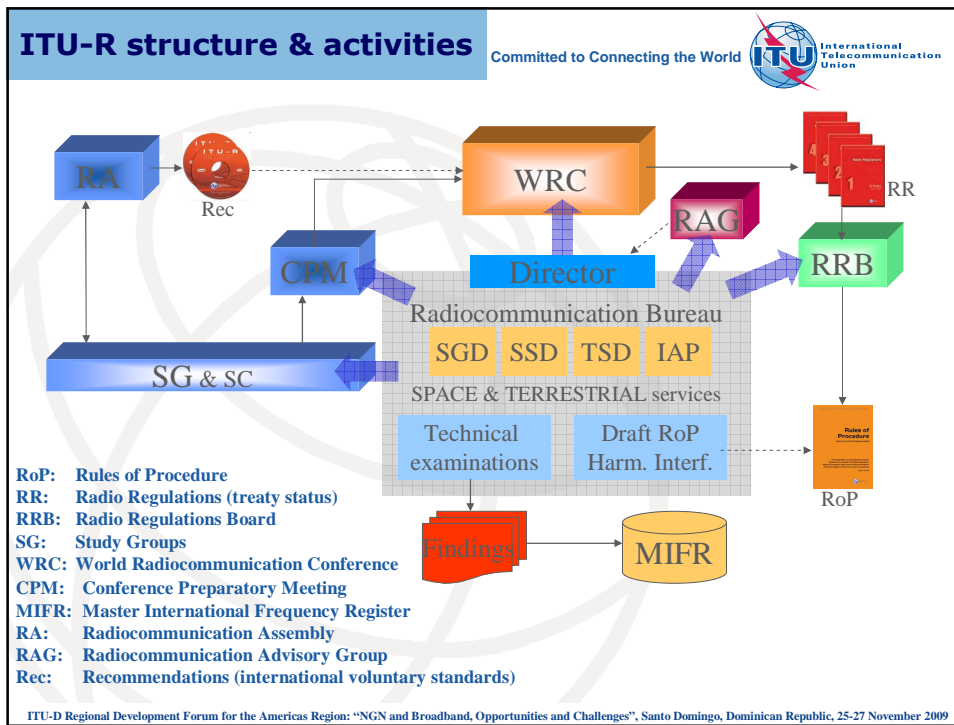
How ITU-R implements these functions?

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- **Fulfilling international spectrum management functions (through the Radiocommunication Bureau and the Radio Regulations Board) in accordance with the Radio Regulations and Regional Agreements/Plans, including:**
 - processing frequency assignments/allotments submitted by Administrations;
 - determination of coordination requirements;
 - maintenance of the Master International Frequency Register (MIFR) and Regional Plans; etc.
- **Developing and implementing ITU-R standards on:**
 - radio devices/applications/systems/networks;
 - procedures, rules and algorithms for development, introduction and maintenance of radio applications/devices/systems/networks.

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WRC
World Radiocommunication Conference

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

 → 

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

WRC-07 Participation
(Americas Member States)

Antigua and Barbuda	Dominica	Panama
Argentina	Dominican Republic	Paraguay
Bahamas	Ecuador	Peru
Barbados	El Salvador	Saint Kitts and Nevis
Belize	Grenada	Saint Lucia
Bolivia	Guatemala	Saint Vincent and the Grenadines
Brazil	Guyana	Suriname
Canada	Haiti	Trinidad and Tobago
Chile	Honduras	United States
Colombia	Jamaica	Uruguay
Costa Rica	Mexico	Venezuela
Cuba	Nicaragua	

WRC-07 & WRC-12 Committed to Connecting the World International Telecommunication Union

WRC-07 (22.10-16.11.2007)


- 30 agenda items, 3100 proposals, 2800 del.!
- almost all services (terrestrial: FS, MS, BS, Amat.S, RAS, RLS, space: FSS, BSS, MSS, EESS, SRS, SO, MetSat, Amat.Sat)
- several applications: IMT, HAPS, HF, GMDSS

WRC-12 (23.01-17.02.2012)

- 33 agenda items,
- again almost all services (terrestrial: RLS, AM(R)S, passive S, FS, BS, MS, Maritime MS, Amat.S, space: AMS(R)S, SRS, BSS, MSS, MetAids, RDSS, MetSat) and other issues (Res.951, SRDs, Cognitive Radio)
- and many applications and systems : UAS, ENG, HAPS, oceanographic radar, ...

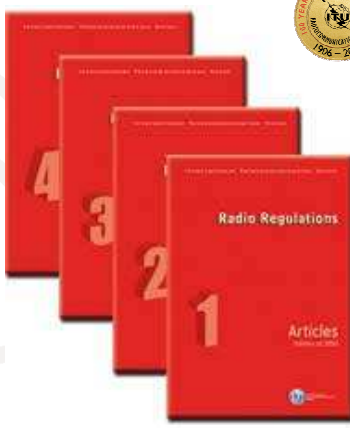

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Radio Regulations (RR)

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The Radio Regulations (international *treaty*) incorporates the decisions of the World Radiocommunication Conferences, including all Articles (Vol.1), Appendices (Vol.2), Resolutions and Recommendations (Vol.3) and ITU-R Recommendations incorporated by reference (Vol.4).

- > 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.

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Radio standardization

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Objectives of ITU-R Study Groups

Develop technical bases for radio conferences

➔


CPM process for WRCs

Establish Recommendations

➔

International voluntary *standards* on:

- spectrum management
- system characteristics and operation



➔

ITU-R represents:

International focal point for standardization of wireless systems

Compile Reports and Handbooks


➔

ITU-R represents:

International focal point for standardization of wireless systems

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ITU-R Study Groups

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


In addition:
CCV: Coordination Committee for Vocabulary
CPM: Conference Preparatory Meeting
SC: Special Committee on regulatory and procedural matters

- ✓ >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

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

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ITU-R Recommendation


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- **Definition:**
 «An answer to a Question or part(s) of a Question which, within the scope of existing knowledge and studies, recommends specifications, data or guidance; provides a recommended way or ways of undertaking a specified task; or a recommended procedure or procedures for a specified application and which is considered to be sufficient to serve as a basis for international cooperation in a given context in the field of radiocommunications.»

Source: Resolution ITU-R 1-5 (§ 6.1.2)

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ITU radio standardization	Committed to Connecting the World  International Telecommunication Union
<ul style="list-style-type: none"> ✓ Mobile (cellular) communications <ul style="list-style-type: none"> • IMT (IMT-2000 & IMT-Advanced) • Intelligent Transportation Systems (ITS) ✓ Broadband Wireless Access (BWA) <ul style="list-style-type: none"> • fixed & mobile (terrestrial) & satellite ✓ Digital Broadcasting <ul style="list-style-type: none"> • Mobile TV ✓ Spectrum management <ul style="list-style-type: none"> • Software-Defined/Cognitive Radios ✓ Emergency communications <ul style="list-style-type: none"> • Climate Change 	
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Radio standardization - reducing the gap	Committed to Connecting the World  International Telecommunication Union
RESOLUTION 47 (Doha, 2006): Enhancement of knowledge and effective application of ITU Recommendations in developing countries	
<i>noting</i> <ul style="list-style-type: none"> ▪ the difficulties in understanding ITU Recommendations and related international standards to apply new technology to the network appropriately and effectively; ▪ the lack of practical information on the application of ITU Recommendations and related standards of other countries, and the lack of guidelines on applying these technical documents, <p style="margin-left: 20px;">→ ITU is instructed</p> <ul style="list-style-type: none"> ▪ to promote participation in training courses and workshops on best-practice application of ITU Recommendations for developing countries; ▪ to establish a database containing information on new technologies that are standardized and develop guidelines on applying ITU Recommendations. <p style="margin-left: 20px;">→ Administrations are encouraged</p> <p style="margin-left: 20px;">to establish and maintain active national structures to provide for coordination of internal preparation and follow-up, and coordination of participation in external regional and international standardization bodies (e.g., ITU-R), to protect their government & industry interests.</p>	
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ITU-R Publications


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

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

The screenshot shows the ITU-R website homepage. The main content area includes a section titled "In Focus: Spotlight on ITU-R's key activities" with links to "ITU global standard for international mobile telecommunications - IMT-Advanced", "Maritime mobile Access and Retrieval System (MARS)", "Radio Communications and Climate Change", and "World Radiocommunication Conference 2011 (WRC-11)". Below this is a "Newsflashes" section with a list of recent updates, including "RRB - Rules of Procedure, Edition of 2009, is now available" and "MARS - BR Circular Letter (CM/17) - ITU maritime services database". The right sidebar features a "Director's corner" with a photo of the director, a "Meetings" section listing upcoming events like "SG-6" and "JTG-5-8", and a "Publications" section listing key publications such as "Radio Regulations" and "List VII - List of International Monitoring Stations".

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Thank you!

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