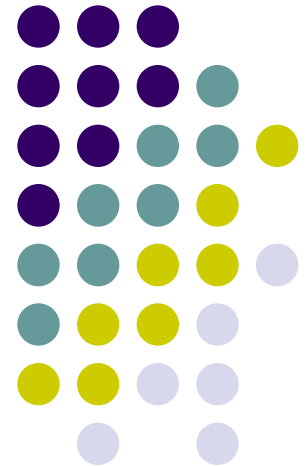


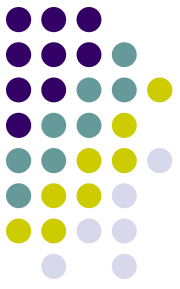
OVERVIEW OF WORLD RADIOCOMMUNICATION CONFERENCES (WRCs)

*USITUA Workshop on WRC-12
December 15, 2012*

*Audrey L. Allison
The Boeing Company
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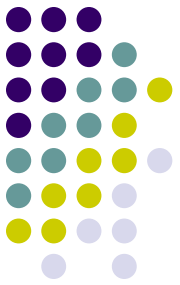
Agenda



- What is the ITU
- Who Participates
- Structure and Instruments
- Elements of the Radio Sector
- WRC Results



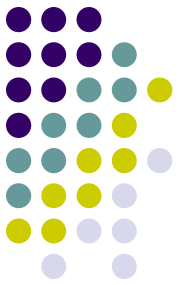
What is the ITU ?



- The International Telecommunication Union (“ITU”) is an intergovernmental organization founded in 1865 headquartered in Geneva, Switzerland.
- ITU is specialized agency of the United Nations within which Member States and Sector Members coordinate the establishment and operation of Telecommunication Networks and Services.
- ITU is responsible for facilitating the regulation, standardization, coordination and development of international telecommunications, as well as the harmonization of national policies.
- Increasingly, ITU is a forum of great value to developing countries to discuss regulation of evolving information and communications technologies, such as the Internet and its many applications.



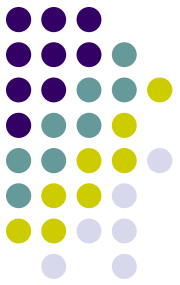
What the ITU is Not!



- ITU is not a regulatory body.
- ITU is not a supra-national entity.
- ITU has extremely limited enforcement powers.
- ITU is not governed by a Director-General.

The ITU is a contribution-driven organization which has successfully functioned for more than a century on the basis of cooperation among nations and stakeholders.

ITU Origins



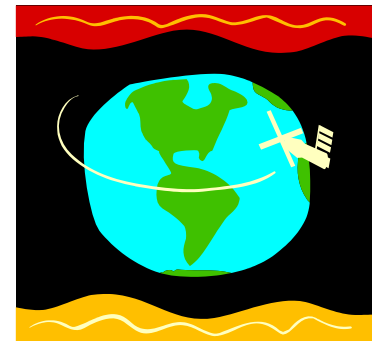
Paris - May 17 1865: International Telegraph Union established in Paris to standardize cross-border telegraphy

Berlin - 1906: International Radiotelegraph Union established to coordinate use of radio frequencies

Madrid – 1932: Merger of two unions. The ITU is formed.

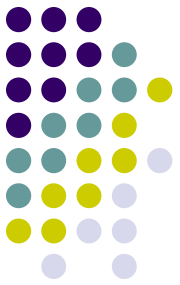
Atlantic City – 1947: Modern structure adopted; joins UN

Geneva – 1963: first World Space Radiocommunication Conference



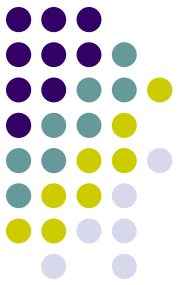
The ITU is the longest running and most successful intergovernmental organization in history.

Purposes of the Union



1. to maintain and extend international cooperation among all Member States for the improvement and rational use of telecommunications of all kinds;
2. to promote and to offer technical assistance to developing countries in the field of telecommunications;
3. To promote development of technical facilities and their efficient operation;
4. To promote the extension of the benefits of new telecommunications technologies to all the world's inhabitants
5. To promote use of telecommunications to facilitate peaceful relations;
6. To harmonize the actions of Member States and promote fruitful and constructive cooperation and partnership between Member States and Sector Members in attainment of those ends;
7. To promote at the international level, the adoption of a broader approach to the issues of telecommunications in the global economy and society.

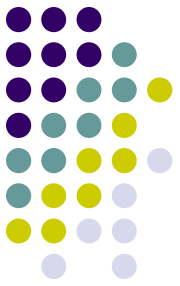
ITU Activities



1. effect allocation of bands of the radio-frequency spectrum, the allotment of radio frequencies and registration of radio-frequency assignments and for space services, of any associated orbital positions in the geostationary-satellite orbit or of any associated characteristics of satellites in other orbits, in order to avoid harmful interference between radio stations of different countries;
2. coordinate efforts to eliminate harmful interference between radio stations of different countries and to improve the use made of the radio-frequency spectrum for radiocommunication services and of the geostationary-satellite and other satellite orbits;
3. Facilitate the worldwide standardization of telecommunications, with a satisfactory quality of service;
4. Coordinate efforts to harmonize the development of telecommunications facilities; notably those using space techniques;

Source: ITU Constitution, Article 1

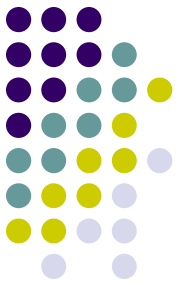
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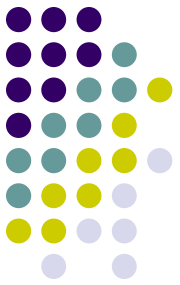


ITU Participants



- **Member States (193)**
 - Near universal membership
 - One country, one vote
- **Sector Members (536)**
 - Including Private Sector Companies, international and regional telecommunication and standards organizations, international satellite organizations
 - Non-voting
- **Associates (158)**
 - Growing category of limited participation
- **Related UN Organizations**
 - ICAO, IMO

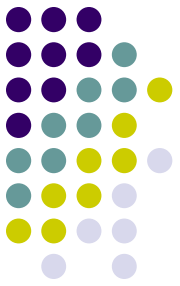




Private Sector Participation

- Companies play a significant role in the development of ITU's contribution-driven work.
- Companies may join as Sector Members through their host government (in US, through application to the State Department).
- Companies can actively participate in lower level activities (without vote), and observe at conferences.
- In the US, private companies may also participate as members of US Delegations and draft official US contributions.
- Minimum annual Sector Member contribution: 31,800 CHF
- Associates may participate in the work of one Study Group for 10,600 CHF.
- ITU now also allowing participation of Academia on a trial basis at reduced cost.

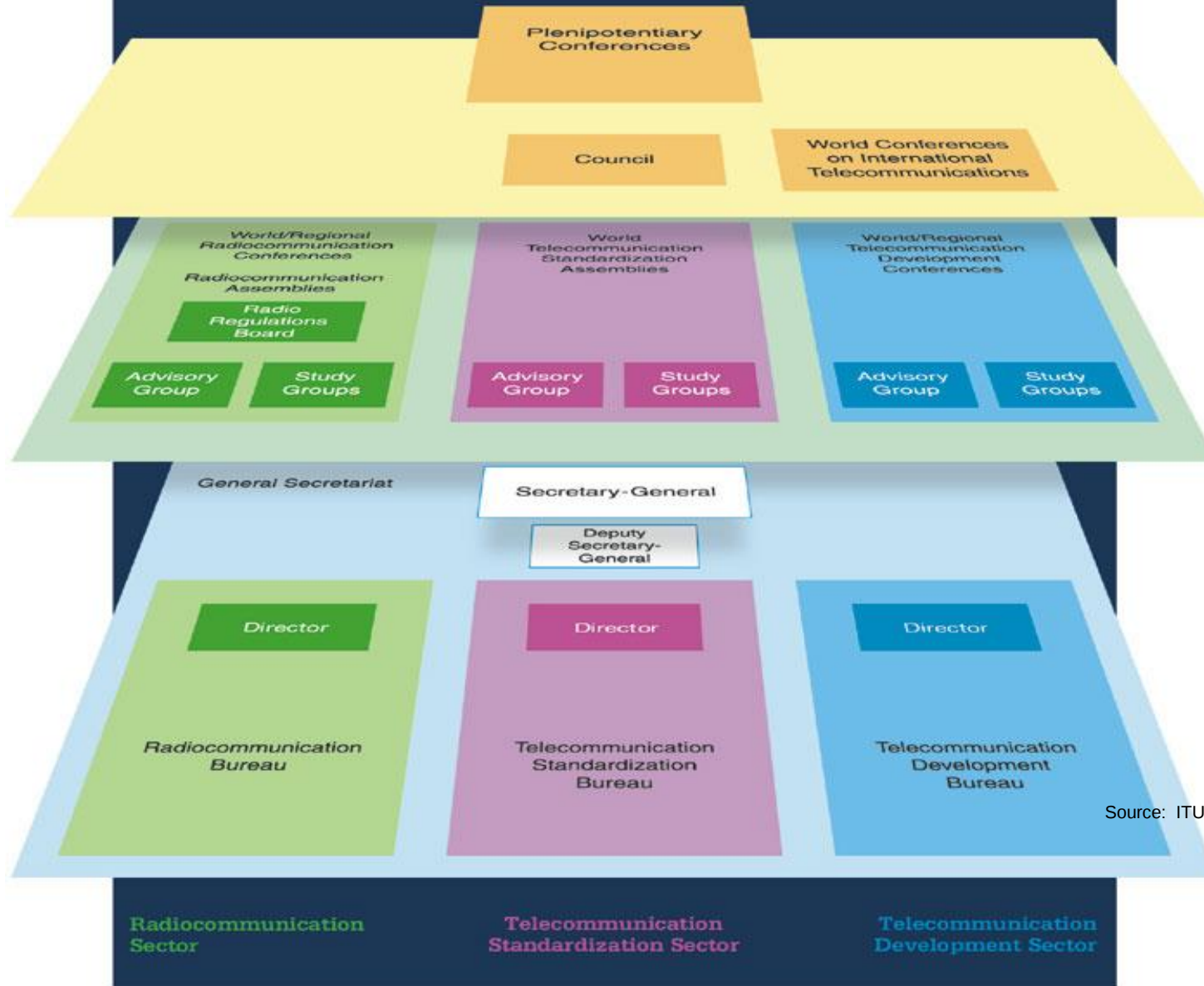
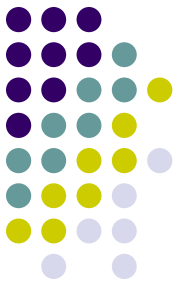
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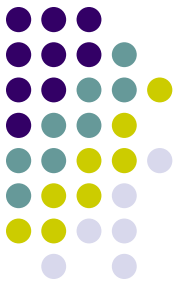
Structure

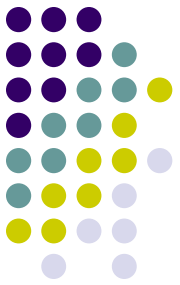


Source: ITU

Secretary-General

- Directs the General Secretariat.
- Legal Representative of the Union.
- Coordinates the Union's activities with the assistance of the Coordination Committee.
- Prepares a report on the policies and strategic plan for the Union, and coordinates its implementation.
- Ensures economic use of the resources of the Union and is responsible to the Council for all administrative and financial aspects of the activities of the Union.
- Secretary-General: Hamadoun Touré (Mali)
- Deputy S-G: Houlin Zhou (China)



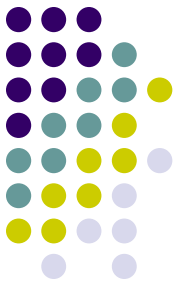


Reflections on ITU Structure

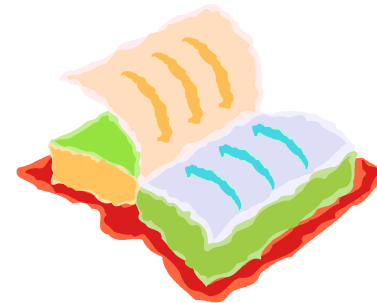
- ITU is a periodic international organization
- ITU has a federal structure; with an elected Secretary General and three elected Directors of the three functional sectors.
- One country, one vote, but usually works by consensus
- Substantive work is contribution driven -- “bottom up.”



Basic Instruments of the ITU

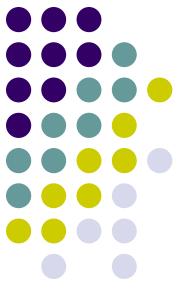


- The ITU Constitution
- The ITU Convention
- Administrative Regulations
 - International Telecommunication Regulations
 - Radio Regulations (includes International Table of Frequency Allocations and HF broadcasting and satellite plans)



These are treaty documents – and as such are considered statutory international law.

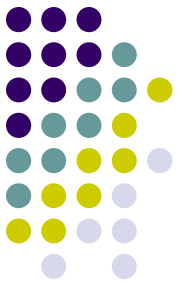
CS Article 44



Use of the Radio-Frequency Spectrum and of the Geostationary-Satellite and Other Satellite Orbits

Member States shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide in a satisfactory manner the necessary services. To that end, they shall endeavour to apply the latest technical advances as soon as possible.

In using frequency bands for radio services, Member States shall bear in mind that radio frequencies and any associated orbits, including the geostationary-satellite orbit, are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of the Radio Regulations, so that countries or groups of countries may have equitable access to those orbits and frequencies, taking into account the special needs of the developing countries and the geographical situation of particular countries.



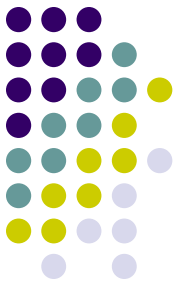
Harmful Interference

No. 197 All stations, whatever their purpose, must be established and operated in such a manner as not to cause harmful interference to the radio services or communications of other Member States or of recognized operating agencies, or of other duly authorized operating agencies which carry on a radio service, and which operate in accordance with the provisions of the Radio Regulations.

No. 198 Each Member State undertakes to require the operating agencies which it recognizes and the other operating agencies duly authorized for this purpose to observe the provisions of No. 197 above.

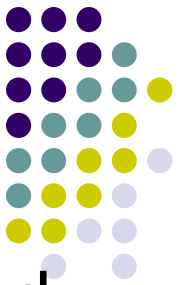
No. 199 Further, the Member States recognize the necessity of taking all practicable steps to prevent the operation of electrical apparatus and installations of all kinds from causing harmful interference to the radio services or communications mentioned in No. 197 above.

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ITU-R Mission

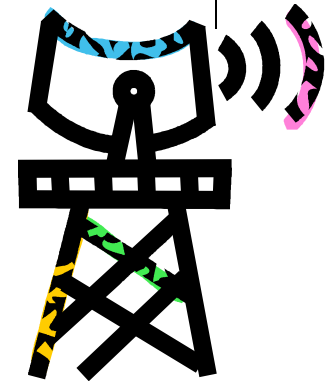
- To Ensure the Rational, Equitable, Efficient and Economical Use of Spectrum and Orbits
- To Carry out Studies and Adopt Recommendations on Radiocommunication Matters

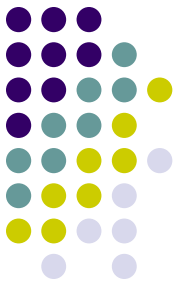


Source: ITU

Radiocommunication Sector

- The **Radiocommunication Sector** manages and coordinates use of the radio-frequency spectrum, including satellite orbits. Performs studies leading to recommendations setting standards for technical and operational parameters for radiocommunication services and systems.
- The **Radiocommunication Bureau (BR)** maintains the **Master International Frequency Register**, which registers and records frequency assignments and orbital characteristics of space services;
- The BR provides assistance to developing countries on use of radio-frequency spectrum and orbital resources and assists in the investigation of cases of harmful interference.

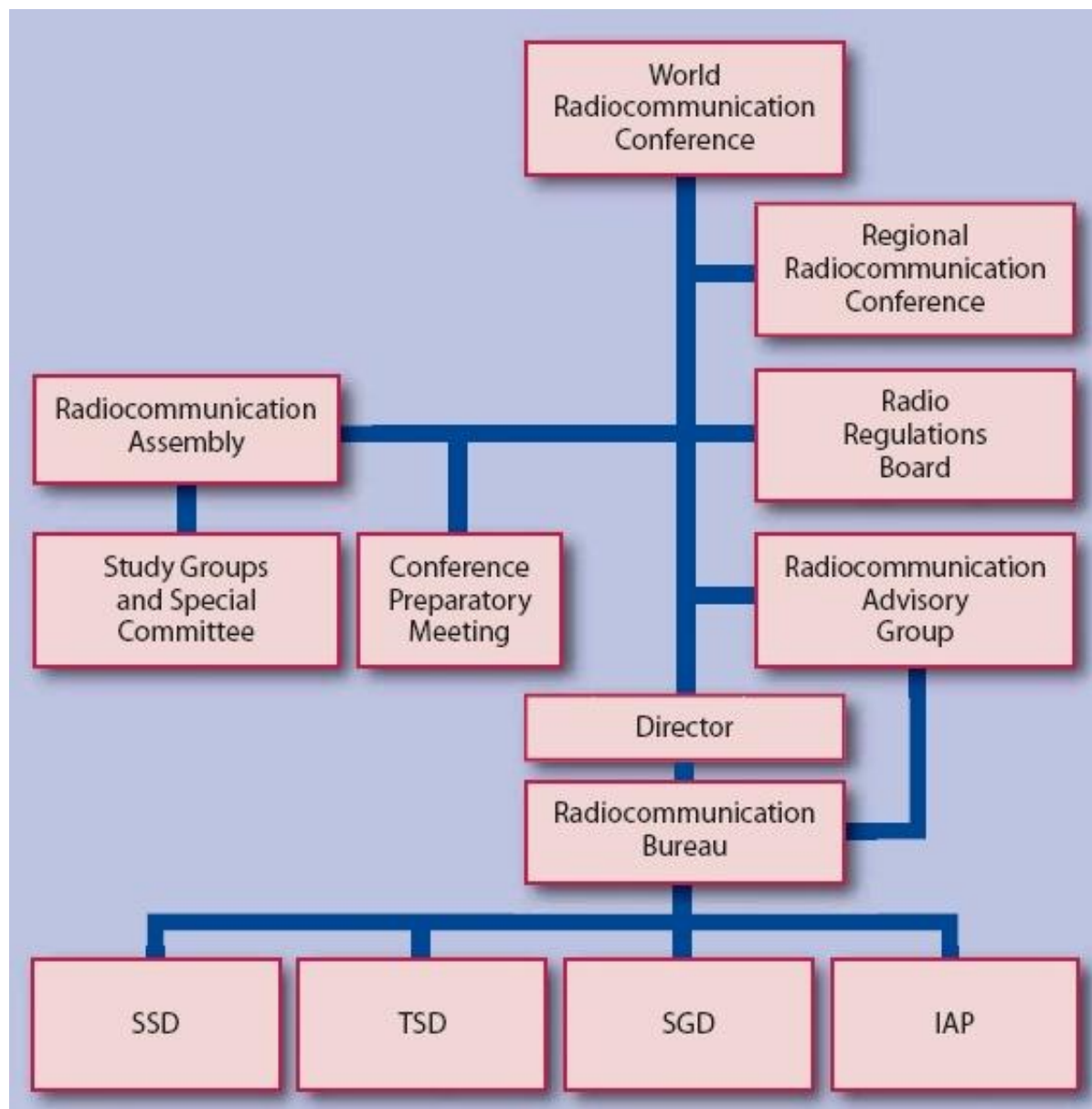




ITU-R Outputs

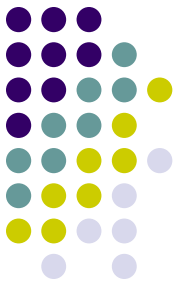
- Radio Regulations (treaty level), including allocations, plans & procedures
- Master International Frequency Register
- Regulatory Publications
- ITU-R Recommendations (Standards)
- Handbooks

ITU-R Structure

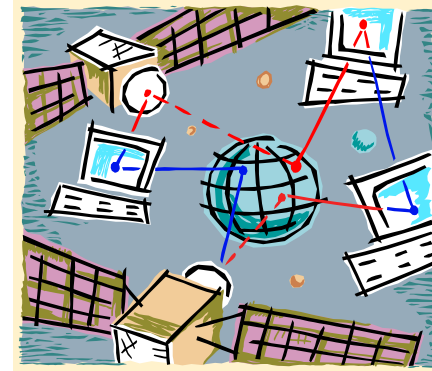


Source: ITU

Radiocommunication Study Groups



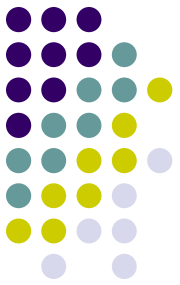
- Established by the RA.
- Carry out technical studies leading to ITU-R Recommendations and advice supporting WRC agenda items.
- ITU-R Recommendations address technical, operational and procedural guidelines for radiocommunication services and systems.
- There are more than 1500 participants in the work of the Study Groups
- Structure was changed by RA-07.



ITU-R STUDY GROUPS

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

Radiocommunication Assemblies (RA)

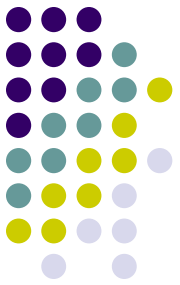


- Establish Study Groups and Conference Preparatory Meeting, elect Chairs, Approve Study Questions
- Approve ITU-R Recommendations developed by the Study Groups
- Approve program of technical studies for the Study Groups
- Adopt procedures and working methods
- Normally held every 3-4 years (coincident with WRC)
- Next RA in 16-20 January 2012.



Source: ITU

World Radiocommunication Conferences



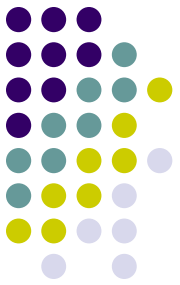
- Normally held every 3-4 years.
- Agenda recommended by previous WRC and approved by Council.
- Revise the Radio Regulations
- Adopt technical studies and work plan for 6-10 year cycle.
- Adopt spectrum allocations; satellite regulatory procedures, allotment plans, *etc.*
- WRC-07: 2800 delegates from 164 countries
- Next WRC: 23 January-17 February 2012, Geneva



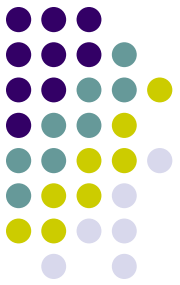
Source: ITU

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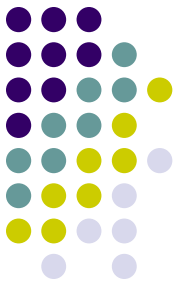
WRC Results



Source: ITU

- Final Acts
 - Preamble
 - Declarations and Reservations
 - Partial Revision of the Radio Regulations (including Appendices)
 - Resolutions and Recommendations
- When revisions come into force, they become part of the RRs.
- Following the Conference, it is up to each country to implement the Final Acts within its domestic legal system.

Radio Regulations

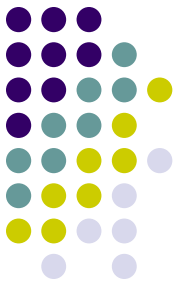


- Radio Regulations (ed. 2008)
 - Volume 1: Articles
 - Volume 2: Appendices
 - Volume 3: Resolutions and Recommendations
 - Volume 4: ITU-R Recommendations Incorporated by Reference
- Current edition contains the texts of the RRs adopted by WRC-95 and the revisions of WRC-97, WRC-2000, WRC-03 and WRC-07.
- A new edition of the RRs will be prepared following WRC-12.



Source: ITU

Radio Regulations Board



- Twelve members elected by Plenipotentiary who are technical and regulatory experts in the field of radio communications
- Adopts Rules of Procedure which interpret complex parts of the Radio Regulations left unresolved by the WRC. Rules of Procedures can be appealed to the next WRC.
- Board Members serve as custodians of the public trust – and work independently from their countries
- Meets “quarterly” in Geneva and works on a part-time basis.
- Board members attend the WRC.



Source: ITU