An Introduction to ITU[1]

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1. These are just my notes for lectures at the 2002 School on Radio Use for Digital and Multimedia Communications, the Abdus Salam International Centre for Theoretical Physics (www.ictp.trieste.it). They draw heavily from the ITU official publications and press releases.[2,3,4,5] We shall review basics issues related to the structure and working methods of International Telecommunication Union. Since to cover the topic in detail one would need much more time, we shall concentrate on a few selected problems, and the original sources should be consulted for more information. Beware of misprints!

What is the ITU?

2. The ITU, or International Telecommunication Union, is an intergovernmental organization, within which governments cooperate with the public and private entities for the development of telecommunications of all kinds: wired and wireless, fixed and mobile, terrestrial and space; telegraph, telephone, radio, television. In the time of writing, the ITU consisted of about 190 Member States and about 600 Sector Members. The Sector members are scientific and industrial companies, public and private operators, broadcasters, regional/international organizations. These have different statuses in the ITU. Member States decide on all ITU matters. One country has one voice, independently of its population, geographical size, or wealth. Traditionally, the decisions are taken by consensus of all members. Sector Members have only an advisory role. Founded in Paris in 1865 as the International Telegraph Union, the ITU took its present name in 1934 and became a specialized agency of the United Nations in 1947.

What the ITU does?

3. The ITU adopts international regulations and treaties governing all telecommunications, within which countries adopt their national legislation. It executes

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[2] Collection of the Basic Texts of the ITU adopted by the Plenipotentiary Conference, ITU 1999

[3] Radio Regulations, ITU 1998

[4] The New ITU Leadership; Global Communications Millenium Edition, p. 33-37

[5] The New Radio Regulations Board of the ITU; Global Communications Millenium Edition, p. 50-53

worldwide management of radio-frequency spectrum resources and is responsible for the registration of frequency assignments and positions of radio stations including those operating on the board of satellites. It develops standards to facilitate the interconnection of telecommunication systems on a worldwide scale regardless of the type of technology used. It adopts recommendations on technical and operational issues related to international telecommunications, included terrestrial and space-based. It coordinates and disseminates information required for the planning and operation of telecommunications services and promotes the development of networks and facilities throughout the world. The ITU assists developing countries by establishing medium-term development policies and strategies in consultation with all partners involved and by providing specialized assistance. In fulfilling its mission, ITU organizes international telecommunications conferences and exhibitions. The Union's mission covers three major domains: a technical domain, a development domain, and a policy domain.

How the ITU Works?

Plenipotentiary Conferences

4. The supreme authority of the Union is Plenipotentiary Conference of all Member States and Council, consisting of 46 Members elected by the Plenipotentiary Conference and acting on behalf of it. Normally, the Conference is convened every four years. Plenipotentiary Conferences adopt the fundamental policies of the Union and decide on the organization and activities of the Union in a treaty known as the International Telecommunication Constitution and Convention. The Member Countries almost continuously seek how to reorganize the ITU and make it more responsible to their changing needs. The conference also elects the Secretary General, Deputy Secretary General, Directors of three Bureaus and members of Radio Regulations Board. All these elected officials can be reelected once. The next Plenipotentiary Conference will be held in Morocco from 23 September to 18 October 2002.

The Council

5. The Council is composed of forty-six Members of the Union elected by the Plenipotentiary Conference with due regard to equitable geographical representation. The Council meets every year to consider, in the interval between two plenipotentiary conferences, telecommunication policy issues, to coordinate the work of the Union and to exercise financial control. The Council takes all steps to facilitate the implementation by Members of the provisions of the Constitution, Convention and decisions of the Union.

World Conferences on International Telecommunications

6. The World Conferences on International Telecommunications, meet according to needs to revise Telecommunications Regulations attached to the Convention. They establish the general principles, which relate to the provision

and operation of international telecommunications services. They also set the rules applicable to administrations and operators in respect of international telecommunications.

ITU Sectors and General Secretariat

7. The ITU members decided to organize the work around three sectors:
   (1) Radiocommunication Sector,
   (2) Telecommunication Standardization Sector,
   (3) Telecommunications Development Sector
   and the General Secretariat.

How Radiocommunication Sector Works?

Tasks

8. Regulating and management the use of radio frequencies is an essential aspect of the work of ITU. The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including those using the geostationary-satellite orbit. The Radiocommunication Sector includes World and Regional Radiocommunication Conferences, Radiocommunications Assemblies and Study Groups, Radio Regulations Board and Radiocommunication Bureau. The Sector deals with regulatory, technical and operational matters related to radio. It develops Radio Regulations and recommended international standards in the field of radio communications. It develops technical information bases for the international sharing and management of frequency spectrum and geostationary satellite orbit resources, for the standardization of radio systems (compatible performance and inter-connectivity) worldwide and for developing radio systems, particularly in developing countries. In 2000, the list of ITU-R recommendations contained about 40 volumes. An example of its current work is the search for agreement on parameters for a single worldwide High-Definition Television (HDTV) standard. The Radiocommunication Sector operates through (1) Radio Conferences (2) Radiocommunication Assemblies and Study Groups, (3) an Advisory Group (4) Radio Regulations Board and (5) Radiocommunications Bureau, headed by Director and responsible for everyday functioning of the Sector and for contacts with the Sector members. The Bureau registers frequencies used throughout the world to minimize cases of mutual interference. Countries notify the sector of the frequencies they assign to their radio stations, and the Bureau consults its Master International Frequency Register to ensure that the frequencies will not cause harmful interference to other stations.

Radiocommunication Conferences

9. The Radiocommunication Conferences are normally held every two years, along with a Radiocommunications Assembly. Their main function is to re-

view and revise, as necessary, the Radio Regulations that govern the use of the radio-frequency spectrum and satellite orbits. These conferences affect all radio-communications services, including terrestrial and space applications. The general scope and conference agenda are established four years in advance. Formerly known as World Administrative Radio Conferences (WARC), the meetings were given a new name and an expanded purpose under the 1992 constitution. The last World Radiocommunication Conference was held in Istanbul (Turkey) in 2000. The next one is planned for 2003.

Radiocommunications Study Groups and Assemblies

10. Radiocommunication Study Groups are groups of experts in which administrations and public/private sector entities participate. More than 1500 specialists from around the world take part. They study technical and operational questions relating to radiocommunication issues and produce recommendations for adoption by the member states, and technical bases for negotiations at the radiocommunication conferences. They also compile various handbooks. The focus of their study is on the use of the radio-frequency spectrum in terrestrial and space radiocommunications (including the geostationary-satellite orbit), the characteristics and performance of radio systems, the operation of radio stations and the radiocommunication aspects of distress and safety matters. Radiocommunications Assemblies provide the technical basis for the work of Radiocommunication Conferences, approve the programme of work of radiocommunication Study Groups and decide on the priority, urgency and time-scale for the completion of their study.

Radio Regulations Board

11. The Board approves the Rules of procedure used in the application of the Radio Regulations and performs duties related to the assignment and utilization of frequencies. It also considers the reports of the Director of the Radiocommunication Bureau on harmful interference and formulates recommendations for their resolution. The Radio Regulations Board is composed of twelve members elected by the Plenipotentiary Conference. The Director of the Radiocommunication Bureau acts as executive secretary to the Radio Regulations Board. The Board members perform their duties for the Union independently. They do not represent their countries or regions, but serve as custodians of an international public trust. They work on a part-time basis and only their traveling, subsistence and insurance expenses are borne by the Union. The Members of the Radio Regulations Board elected for the current period are: Mr. Pierre Aboudarham of France, Mr. R. Agarwal of India, Mr. James Carrol of the USA, Mr. Muhammad Javed of Pakistan, Mr. Gabor Kovacs of Hungary, Mr. Carlos Merchan-Escalante of Mexico, Mr. Hugh Railton of New Zealand, Prof. Ryszard Struzak of Poland, Mr. John Tandoh of Ghana, Dr. Valery Timofeev of Russia, Mr. Ahmed Toumi of Morocco, Mr. Jean-Baptiste Yao-Kouakou of Cote d'Ivoire. The Director of the Radiocommunication Bureau acts as executive secretary to the Radio Regulations

Board. The Director of the Bureau elected for the current period 1995-1998 is Mr. Robert W. Jones of Canada.

How Telecommunication Standardization Sector Works?

Tasks

12. The Telecommunication Standardization Sector includes World Telecommunication Standardization Conferences and Telecommunication Standardization Bureau. It deals with technical, operating and tariff questions and issues recommendations aimed at standardizing telecommunications worldwide. In 200, the list of ITU-T recommendations contained about 500 items. The aim is to ensure compatibility of equipment and systems across as wide a geographic area as possible and cover a broad range of telecommunications and telecommunications-related sectors including: network operation, tariffs, accounting principles, maintenance, switching, signaling, and data communication. The Standardization Sector operates through: (1) World Telecommunication Standardization Conferences and Study Groups, (2) an Advisory Group on Standardization and (3) Standardization Bureau, headed by an elected Director and responsible for everyday functioning of the Sector and for contacts with the Sector members. The Director of the Telecommunication Standardization Bureau elected for the current period is Mr. Houlin Zhao of China.

Telecommunications Standardization Conferences and Study Groups

13. Telecommunications Standardization Conferences are normally held every four years. They approve standards called Recommendations because of their voluntary character and approve the programme of work. Although they are not binding, ITU Recommendations are generally complied with because they guarantee the interconnectivity of networks and technically enable services to be provided on a worldwide scale. Telecommunications Standardization Study Groups are groups of experts in which administrations and public/private sector entities participate. Their activities cover all aspects of telecommunications excluding those specific to radio.

How Telecommunications Development Sector Works?

Tasks

14. The Telecommunications Development Sector includes World and Regional Telecommunication Development Conferences, Study Groups, and Telecommunication Development Bureau. The role of the Sector is to discharge the Union's dual responsibility as a United Nations specialized agency and executing agency for implementing projects under the United Nations development system or other funding arrangements. The goal is to achieve universal telecommunications, so that every person is within reach of telecommunication service. The Sector enhances telecommunications development by

offering, organizing and coordinating technical cooperation and assistance activities. The Sectors consist of Development Conferences and Study Groups and Bureau, headed by an elected Director and responsible for everyday functioning of the Sector and for contacts with the Sector members. The Director of the Telecommunications Development Bureau elected for the current period is Mr. Hamadoun Touré of Mali.

Development Conferences

15. Development Conferences are convened at regular intervals to establish strategies for a balanced worldwide development of telecommunications. The conferences serve as fora for the study of policy issues, organizational, regulative, and technical questions, and the identification of new funding sources. They fix the objectives and strategies. Development Conferences may set up project-oriented Development Study Groups to undertake studies on specific aspects of issues of concern to developing countries. In general, one world development conference, and five regional development conferences (Africa, Asia/Pacific, Americas, Europe, Arab States) are held during the four-year interval between plenipotentiary conferences. The first World Telecommunication Development Conference was held in Buenos Aires in March 1994 and the second was called to Malta in 1998. The next World Telecommunication Development Conference is to be held in Istanbul (Turkey) from 18 to 27 March 2002.

What Are Advisory Groups?

16. There are three Advisory Groups, called Radiocommunication Advisory Group or RAG; Telecommunication Standardization Advisory Group, or TSAG; and Telecommunication Development Advisory Board, or TDAB. Their task is to advise the Director of the Sector's Bureau on all matters relevant to the Sector activities that are not covered by other ITU structures. The advisory groups are open to representatives of administrations, of organizations authorized to participate in the work of the Union and of representatives of Study Groups of the Sector.

What Does General Secretariat?

17. The general secretariat is the office of the ITU Secretary General and its Deputy who represent the Union. The Secretary General elected for the current period is Mr. Yoshio Utsumi of Japan, and the Deputy Secretary General is Mr. Roberto Blois of Brazil. In addition to handling all the administrative and financial aspects of the Union's activities, the work of the General Secretariat covers the provision of computer services, publication and dissemination of information on telecommunication matters, organization and provision of logistic support to the Union's conferences and the coordination work. The ITU publications can be bought electronically, see www.itu.int/publications. The on-line version of its journal, "ITU News" is available at http://www.itu.int/itunews. The general secretariat is also re-

sponsible for public relations and relations with Members, industry and users. These duties include also organization of ad hoc high-level global gatherings such as the World Telecommunication Policy Forum (WTPF) 1996 on global mobile personal communications by satellite or WTPF 1998 on trade in communication services, or World Summit on the Information Society to be held in 2003 in Geneva and then in 2005 in Tunis, as well as organization of regular World and Regional TELECOM Exhibitions and Forums and actions connected with the dissemination of information to the press, corporate and individual users of telecommunications, academic circles and the general public and electronic information exchange and access to ITU documents, publications and databases. Through its Telecom Information Exchange Services (TIES), ITU has played a key role in advancing modern communication services among the ITU members and also among UN organizations in Geneva. TIES maintain its own World Wide Web home page, and provide Internet services, including an on-line access to most of its publications and documents. The ITU organizes the world's foremost exhibition of telecommunications equipment, "TELECOM," held every four years in Geneva, as well as regional telecommunications exhibitions in various countries. The nearest TELECOM ASIA 2002 is planned for 2 to 7 December in Hong Kong.

Who Can Participate in ITU Conferences?

18. Radiocommunication Assemblies, Telecommunication Standardization Conferences and Development Conferences are open to all ITU Member Countries. They are also open to the United Nations, intergovernmental organizations operating satellite systems, authorized operators, scientific and industrial groups, telecommunication entities and financing or development institutions, international standardization organizations, international financing and development organizations, international telecommunication organizations, the specialized agencies of the United Nations, the International Atomic Energy Agency and international organizations dealing with matters of interest to the conference or assembly. Participation in other conferences is restricted to ITU Member countries, the United Nations and its specialized agencies, the International Atomic Energy Agency, regional telecommunications organizations and intergovernmental satellites operators. Participation in Study groups and in Advisory groups is open to both the Member Countries and Sector Members.

How is the ITU Financed?

19. The ITU members cover the cost of all ITU-related activities and contribute to the ITU budget. ITU members choose freely their class of contribution between 1/16 to 40 units. The value of the contributory unit is calculated by dividing the ordinary budget of the Union by the number of units contributed by Members. The contribution of ITU Member Countries covers participa-

tion in all sectors and all activities except regional radio conferences, which requires an additional financial contribution.

How to Contact the ITU?

ITU Headquarters: *International Telecommunication Union, Place des Nations, CH-1211 Geneva 20, Tel. 730.5111, Fax. 733.7256, WEB: http://www.itu.int, GOPHER: gopher://gopher.itu.int*

Regional Offices

Africa

ITU Regional Office for the Arab States, P.O.Box 8092, Nasr City, Cairo, Arab Republic of Egypt, Tel. (+20-2) 26 26 620, Fax (+20-2) 262 22 74

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ITU Area Representation, c/o UNDP, P.O.Box 4775, Harare, Zimbabwe, Tel. (+263-4) 777 59 41, Fax (+263-4) 735 089

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