ITU

GENERAL OVERVIEW

ITU-T

TELECOMMUNICATION
STANDARDIZATION
SECTOR

TSB TELECOMMUNICATION
STANDARDIZATION
BUREAU

ITU Telecommunication Standardization Sector (ITU-T)

ITU and ITU-T

Yoshio UTSUMI
Secretary-General of ITU

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Director of TSB

ITU is a UN specialized agency on telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is one of the three Sectors of the International Telecommunication Union (ITU), which was founded in 1865. ITU-T was established on 1 March 1993 within the framework of the "new" ITU, replacing the former International Telegraph and Telephone Consultative Committee (CCITT). The origins of ITU-T date back almost a century, making it the only existing global standardization body whose pre-eminence has been constant for so long.

The function of ITU-T is to provide global telecommunication standards by studying technical, operating and tariff questions. The results of these studies are published as ITU-T Recommendations.

Impact of ITU-T Recommendations

ITU-T produces high-quality standards (Recommendations) on technical, operating and tariff questions. At present, more than 2700 ITU-T Recommendations on some 70,000 pages are in force. Although ITU-T Recommendations are non-binding, they are widely used because they guarantee the interconnectivity and interoperability of networks and enable telecommunication services to be provided worldwide.

Activities of ITU-T

Standardization work is carried out by 13 Study Groups, in which representatives of the ITU-T membership develop Recommendations for the various fields of international telecommunications. The priority fields of study include:

- IP interworking and related matters
- Network aspects of mobility
- Network access technologies (xDSL)
- Optical networking technologies
- Tariff and accounting issues
- Multimedia services and systems

ITU-T standardization activities are conducted in cooperation with many other standards development organizations (SDOs). ITU-T also conducts seminars and workshops within its domains of competence.

Who are the members of ITU-T?

They represent a wide range of organizations with an interest in telecommunications, including all the major players in service provision, equipment manufacturing, and network design. The public sector, represented by 189 Member States and the private sector, represented by over 400 Sector Members, (i.e. companies including operators and industry, and international organizations) cooperate within ITU-T for the development of standards that benefit telecommunication users worldwide.

How to influence the future of global telecommunications

Join ITU-T as a Sector Member or an Associate!

Participating in ITU-T means to actively take part in the Sector's standardization work and securing the influence of your organization's business goals and policies on the development of standards within its business sphere. ITU-T provides a meeting platform for first-class experts from all over the world, learning of their plans and objectives, sharing experience and information. Participation to the work of the ITU-T Study Groups provides access to a wealth of information not likely to be found elsewhere in this concentrated form.

Companies and other organizations can participate in ITU-T as a Sector Member, which gives you full access to all ITU-T Study Groups or as Associates to a selected single Study Group. The ITU-T website at http://www.itu.int/ITU-T/membership provides detailed information and guides you through the application process.

Structure of ITU-T

ITU-T Study Groups

The ITU Telecommunication Standardization Study Groups (SG) and their Working Parties are at the core of the standardization work. They study the Questions and elaborate the Recommendations.

TSAG

The Telecommunication Standardization Advisory Group (TSAG) reviews priorities, programmes, operations, financial matters and strategies for the Sector, follows up on the accomplishment of the work programme, restructures and establishes ITU-T Study Groups, provides guidelines to the study groups, advises the Director of TSB, elaborates A-series Recommendations on organization and working procedures.

WTSA

The World Telecommunication Standardization Assembly (WTSA), which takes place every four years, defines general policy for the Sector, establishes the Study Groups and approves their work programme for each study period of four years, appoints the Study Group Chairmen and Vice-Chairmen.

TSB

The Telecommunication Standardization Bureau (TSB) acts as the Secretariat of ITU-T, organizing and coordinating the work of the sector. The Director of TSB is elected by the ITU Plenipotentiary Conference.

Study Group 2

Operational aspects of service provision, networks and performance

Lead Study Group for service definition, numbering and routing

Responsible for studies relating to:

- principles of service provision, definition and operational requirements of service emulation;
- numbering, naming, addressing requirements and resource assignment including criteria and procedures for reservation and assignment;
- routing and interworking requirements;
- human factors;
- operational aspects of networks and associated performance requirements including network traffic management, quality of service (traffic engineering, operational performance and service measurements);
- operational aspects of interworking between traditional telecommunication networks and evolving networks;
- evaluation of feedback from operators, manufacturing companies and users on different aspects of network operation.

Study Group 3

Tariff and accounting principles including related telecommunication economic and policy issues

Responsible for studies relating to tariff and accounting principles for international telecommunication services and study of related telecommunication economic and policy issues. To this end, Study Group 3 shall in particular foster collaboration among its Members with a view to the establishment of rates at levels as low as possible consistent with an efficient service and taking into account the necessity for maintaining independent financial administration of telecommunication on a sound basis.

Study Group 4

Telecommunication management, including TMN

Lead Study Group on TMN

Responsible for studies regarding the management of telecommunication services, networks, and equipment using the telecommunication management network (TMN) framework. Additionally responsible for other telecommunication management studies relating to designations, transport-related operations procedures and test and measurement techniques and instrumentation.

Study Group 5

Protection against electromagnetic environment effects

Responsible for studies relating to protection of telecommunication networks and equipment from interference and lightning.

Also responsible for studies related to electromagnetic compatibility (EMC), to safety and to health effects connected with electromagnetic fields produced by telecommunication installations and devices, including cellular phones.

Study Group 6

Outside plant

Responsible for studies relating to outside plant such as the construction, installation, jointing, terminating, protection from corrosion and others forms of damage from environment impact, except electromagnetic processes, of all types of cable for public telecommunications and associated structures.

Study Group 9

Integrated broadband cable networks and television and sound transmission

Lead Study Group on integrated broadband cable and television networks

Responsible for studies relating to:

- Use of cable and hybrid networks, primarily designed for television and sound programme delivery to the home, as integrated broadband networks to also carry voice or other time critical services, video on demand, interactive services, etc.
- Use of telecommunication systems for contribution, primary distribution and secondary distribution of television,sound programmes and similar data services.

Study Group 11

Signalling requirements and protocols

Lead Study Group on intelligent networks

Responsible for studies relating to signalling requirements and protocols for Internet Protocol (IP) related functions, some mobility related functions, multimedia functions and enhancements to existing Recommendations on access and internetwork signalling protocols of ATM, N-ISDN and PSTN.

Study Group 12

End-to-end transmission performance of networks and terminals

Lead Study Group on Quality of Service and performance

Responsible for guidance on the end-to-end transmission performance of networks, terminals and their interactions, in relation to the perceived quality and acceptance by users of text, speech, and image applications. This work includes the related transmission implications of all networks (e.g., those based on PDH, SDH, ATM and IP) and all telecommunications terminals (e.g., handset, hands-free, headset, mobile, audiovisual and interactive voice response).

Study Group 13

Multi-protocol and IP-based networks and their internetworking

Lead Study Group for IP-related matters, B-ISDN, Global Information Infrastructure and satellite matters

Responsible for studies relating to internetworking of heterogeneous networks encompassing multiple domains, multiple protocols and innovative technologies with a goal to deliver high-quality, reliable networking. Specific aspects are architecture, interworking and adaptation, end-to-end considerations, routing and requirements for transport.

Study Group 15

Optical and other transport networks

Lead Study Group on access network transport and on optical technology

Study Group 15 is the focal point in ITU-T for studies on optical and other transport networks, systems and equipment. This encompasses the development of transmission layer related standards for the access, metropolitan and long haul sections of communication networks.

Study Group 16

Multimedia services, systems and terminals

Lead Study Group on multimedia services, systems and terminals and on e-business and e-commerce

Responsible for studies relating to multimedia service definition and multimedia systems, including the associated terminals, modems, protocols and signal processing.

Study Group 17

Data Networks and Telecommunication Software

Lead Study Group on frame relay, communication system security, languages and description techniques

Responsible for studies relating to data communication networks, for studies relating to the application of open system communications including networking, directory and security, and for technical languages, the method for their usage and other issues related to the software aspects of telecommunication systems.
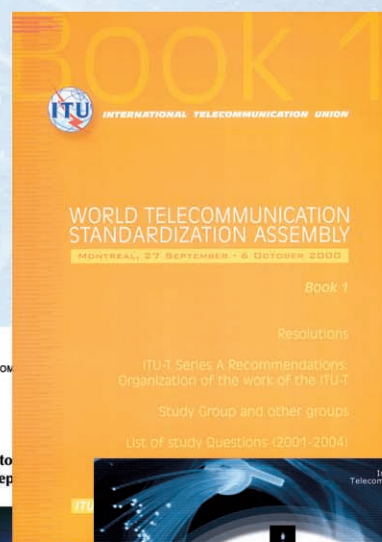
Special Study Group

IMT-2000 and Beyond

Lead Study Group on IMT 2000 and Beyond and for mobility

Responsible for studies relating to network aspects of International Mobile Telecommunications 2000 (IMT-2000) and beyond, including wireless Internet, convergence of mobile and fixed networks, mobility management, mobile multimedia functions, internetworking, interoperability and enhancements to existing ITU-T Recommendations on IMT-2000.

SERIES OF ITU-T RECOMMENDATIONS

A series   Organization of the work of ITU-T

B series   Means of expression: definitions, symbols, classification

C series   General telecommunication statistics

D series   General tariff principles

E series   Overall network operation, telephone service, service operation and human factors

F series   Non-telephone telecommunication services

G series   Transmission systems and media, digital systems and networks

H series   Audiovisual and multimedia systems

I series   Integrated services digital network

J series   Transmission of television, sound programme and other multimedia signals

K series   Protection against interference

L series   Construction, installation and protection of cables and other elements of outside plant

M series   TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits

N series   Maintenance: international sound programme and television transmission circuits

O series   Specifications of measuring equipment

P series   Telephone transmission quality, telephone installations, local line networks

Q series   Switching and signalling

R series   Telegraph transmission

S series   Telegraph services terminal equipment

T series   Terminals for telematic services

U series   Telegraph switching

V series   Data communication over the telephone network

X series   Data networks and open system communications

Y series   Global information infrastructure and Internet protocol aspects

Z series   Languages and general software aspects for telecommunication systems