

International Telecommunication Union

ITU-T overview



Second edition

April 2005

Photo credits: ITU/Alain de Ferron, ITU/TSB Promotion

Concept: TSB Workshops, SDO Coordination and Promotion Division (WSP)

Graphic Design: ITU Publication Composition Service

ITU Telecommunication Standardization Sector (ITU-T)

ITU is the UN specialized agency for telecommunications. ITU's Telecommunication Standardization Sector (ITU-T) embodies ITU's oldest activity – developing internationally agreed technical and operating standards (ITU-T Recommendations) and defining tariff and accounting principles for international telecommunication services. ITU-T is the only place where government and industry work together to foster seamless interconnection of the world's communication network and systems.

The Telecommunication Standardization Bureau (TSB) acts as the secretariat of ITU-T, organizing and coordinating the work of the sector. Mr Houlin Zhao, Director of TSB, was elected at the 1998 Plenipotentiary Conference in Minneapolis (USA), and was re-elected for a second term (2003-2006) as Director of TSB at the 2002 Plenipotentiary Conference in Marrakesh (Morocco).



Yoshio UTSUMI
Secretary-General of ITU



Houlin ZHAO
Director of TSB



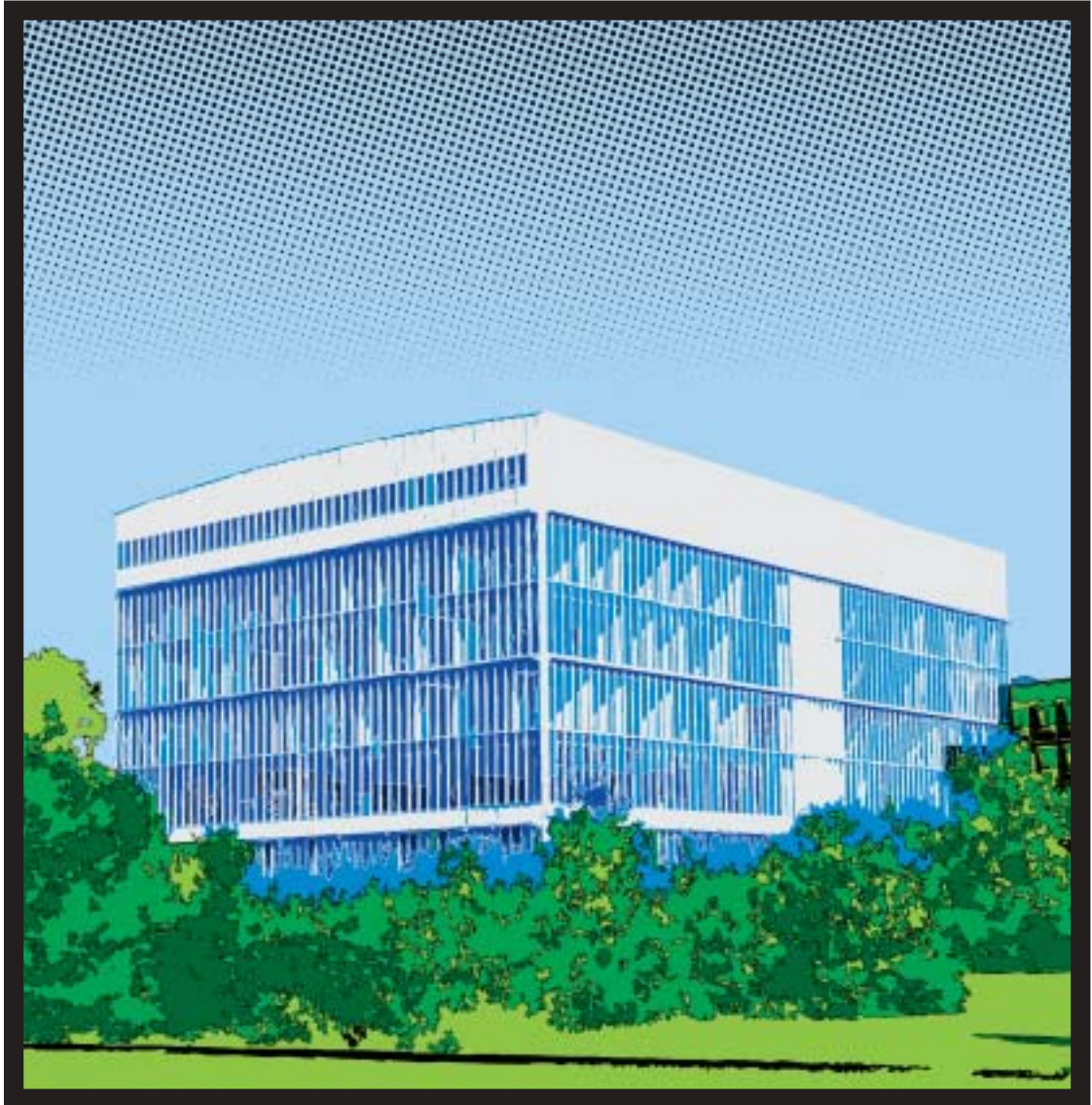
Towards a New Broadband Global Infrastructure

In the field of information and communication technologies (ICT), ITU-T is leading the way in standards development. ITU-T efforts aim to define the building blocks of a new broadband global infrastructure. The next-generation network (NGN) is a key area of study for ITU-T as operators around the world look to migrate to an IP-based infrastructure. The convergence between Internet protocol (IP), public switched telephone network (PSTN), digital subscriber line (DSL), cable television (CATV), wireless local area network (WLAN) and mobile technologies is a task that many believe is impossible without the development of global standards.

Internet governance and cybersecurity are also topics that Members have asked ITU-T to concentrate on in the coming years. Additionally, a key focus is finding solutions to bridge the digital divide, helping to bring the benefits of new technologies to the developing world.

Meeting the Demands of Industry

With a majority of its membership from the private sector, ITU-T understands the crucial balance between rapid delivery and stability in standards development. The Sector has already made great progress in speeding up time-to-market of its Recommendations, and continues to work hard to ensure vital new standards are made available to the industry in the shortest possible time. Over the last decade, ITU-T has dramatically overhauled its standards-making, streamlining approval procedures and cutting development time by as much as 95 per cent. This means that an average standard, which took around four years to develop 10 years ago, can now be approved in as little as eight weeks for technical standards and nine months for Recommendations having policy or regulatory implications.



Join ITU-T and Influence the Future of ICT

Throughout the course of every year, hundreds of experts gather at ITU-T meetings, contributing their time, know-how and expertise to the study groups which develop ITU-T Recommendations. There are 448 private sector entities currently active in ITU-T, together with 189 Member States. ITU-T at present produces around 210 Recommendations each year.

Membership of ITU-T will allow your company to:

- Secure the influence of your company in the development of standards
- Help shape industry standards and vendor products to your company's needs
- Leverage the work and knowledge of the industry's best experts
- Plan, purchase and implement in front of the curve, instead of behind it
- Use knowledge of work-in-progress in long-term planning
- Start implementation work long before standards become public
- Gain competitive advantage from long lead times
- Avoid money-wasting investments in dead-end technologies
- Use knowledge in long-range planning, short-term budgeting and acquisition, staffing and training, infrastructure decisions, enterprise architecture, hardware and software selection
- Stay ahead of the competition
- Work with leading vendors and companies in the industry
- Get return on investment (ROI) from being ahead of the pack

For further information on how to join ITU-T, see:

www.itu.int/ITU-T/membership

or send an e-mail to **tsbmail@itu.int**

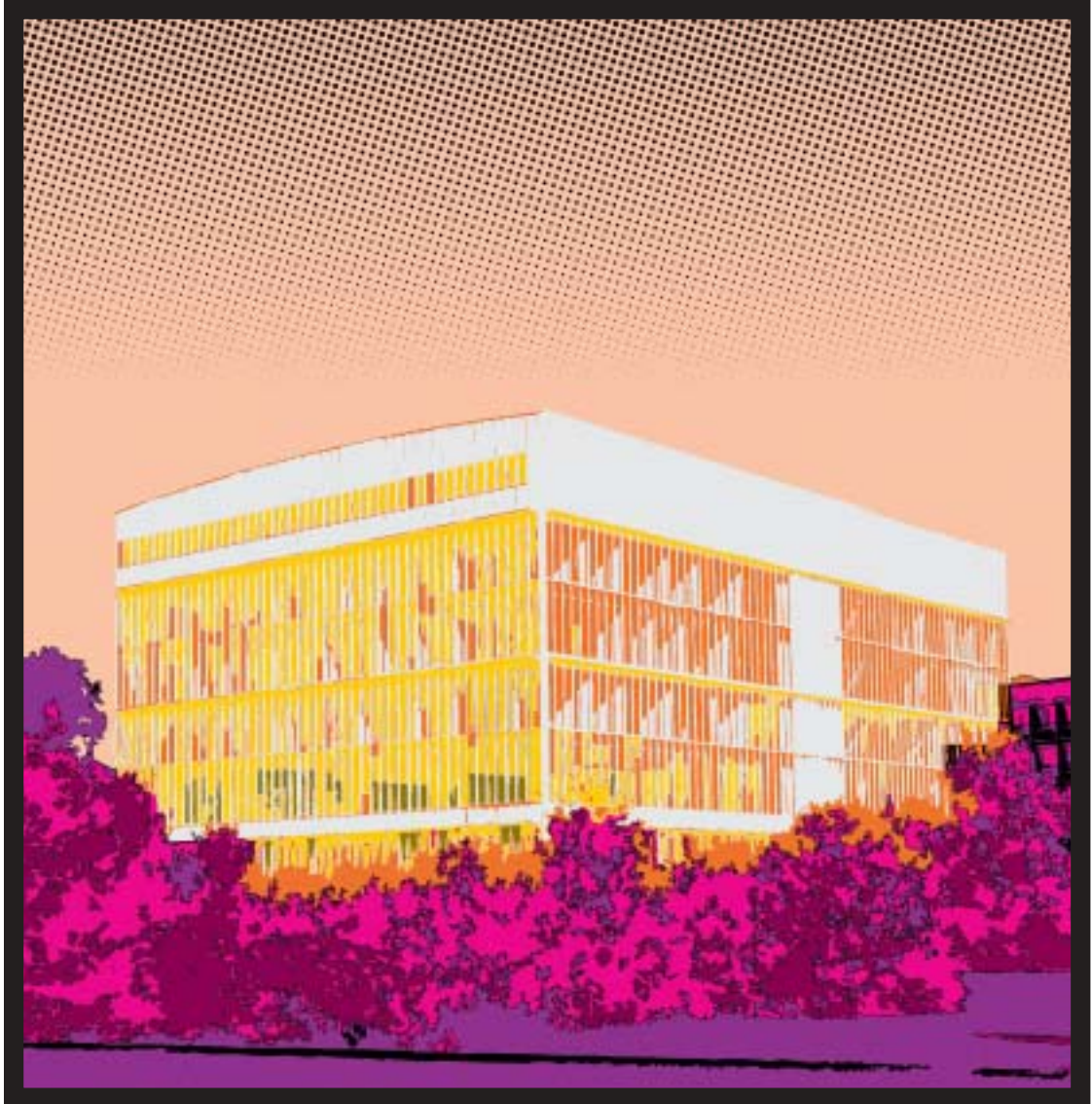
To request a free copy of *ITU-T Guide for Beginners*, please contact **standards@itu.int**.

Structure of ITU-T Study Groups and TSAG

Study groups are made up of members from industry and governments and it's here that the work of ITU-T is done. Exceptionally, in response to urgent market needs, a focus group (FG) may be established. The objective of an FG is to help advance the work of ITU-T in a specific area and in a short period of time, also encouraging the participation of members of other standards organizations, including experts who may not be members of ITU. The working structure of ITU-T is decided by Member States, in consultation with Sector Members, every four years at the World Telecommunication Standardization Assembly (WTSA). Within the Telecommunication Standardization Bureau (TSB), the Studies, Strategy and Cooperation Department (SSCD), headed by the Deputy to the Director of TSB, Mr Reinhard Scholl, provides secretariat support to the study groups. This means organizing and coordinating study group meetings, assigning a Counsellor and an Assistant to each for administrative tasks including the processing of contributions and advice on the implementation of the approval process for ITU-T Recommendations.



Reinhard SCHOLL
Deputy to the TSB Director
and Secretary to TSAG



Telecommunication Standardization Advisory Group (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, establishes and provides guidelines to ITU-T study groups, advises the Director of TSB and develops Recommendations on organization and working procedures (A-series).

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.



Richard HILL
Counsellor of SG2

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 fosters 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 of maintaining independent financial administration of telecommunications on a sound basis.



Saburo TANAKA
Counsellor of SG3

Study Group 4: Telecommunication management

Lead Study Group on telecommunication management

Responsible for studies regarding the management of telecommunication services, networks, and equipment, including support for next-generation networks (NGN) and the application and evolution of the telecommunication management network (TMN) framework. Additionally, it is responsible for other telecommunication management studies relating to designations, transport-related operations procedures, and test and measurement techniques and instrumentation.

(Counsellor: Mr Greg JONES, photo page 12)

Study Group 5: Protection against electromagnetic environment effects

Responsible for studies relating to:

- ❑ **protection of telecommunication networks and equipment from interference and lightning;**
- ❑ **electromagnetic compatibility (EMC), safety and health effects connected with electromagnetic fields produced by telecommunication installations and devices, including cellular phones.**



Judit KATONA KISS
Counsellor of SG5 and SG12

Study Group 6: Outside plant and related indoor installations

Responsible for studies on outside plant and related indoor installations covering:

- ❑ **construction of all types of terrestrial cable for public telecommunications, including maritized terrestrial cables and the associated hardware (closures, connectors, cabinets, poles, etc.);**
- ❑ **construction and maintenance of the telecommunication infrastructure (this includes interoffice and access cable and hardware installations, in both public telecom property and private premises);**
- ❑ **installation, jointing and termination of cables;**
- ❑ **protection of the environment from the deployment of telecommunication-related cable, hardware and equipment in outside plant;**

- ❑ **protection from corrosion and other forms of damage from environment impact, except electromagnetic processes, of cables for public telecommunications and associated structures;**
- ❑ **protection against fire of telecommunication buildings and outside plant;**
- ❑ **procedures for safety of personnel.**
(Counsellor: Mr. Simão CAMPOS, photo page 13)

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.**



Masamichi NIJYA
Engineer of SG9 and
Secretary to TSB Director's
Ad Hoc Group on IPR

Study Group 11: Signalling requirements and protocols

*Lead Study Group on signalling 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 for networks including convergence toward NGN (Next-Generation Networks) and enhancements to existing Recommendations on access and internetwork signalling protocols of ATM, BICC, N-ISDN and PSTN.



Arshey ODEDRA
Engineer of SG 11

Study Group 12: Performance and quality of service

Lead Study Group on quality of service and performance

Responsible for studies relating to end-to-end transmission performance of terminals and networks, in relation to the perceived quality and acceptance by users of text, data, speech, and multimedia applications. Although this work includes the related transmission of all networks and all telecommunication terminals, a special focus is given to IP QoS, interoperability and implications for NGN, and it also includes work on performance and resource management.

(Counsellor: Ms Judit KATONA KISS, photo page 9)

Study Group 13: Next-Generation Networks (NGN)

Lead Study Group for NGN and satellite matters.

Responsible for studies relating to:

- ❑ **the architecture, evolution and convergence of NGN;**
- ❑ **frameworks and functional architectures, and signalling requirements for NGN;**
- ❑ **NGN project management coordination across study groups: release planning, implementation scenarios and deployment models, network and service capabilities, interoperability, impact of IPv6, NGN mobility and network convergence and public data network aspects.**



Georges SEBEK
Counsellor of SG13 and SG17

Study Group 15: Optical and other transport network infrastructures

*Lead Study Group on access network transport
Lead Study Group on optical technology*

Focal point in ITU-T for the development of standards on optical and other transport network infrastructures, systems, equipment, optical fibres, and the corresponding control plane technologies to enable evolution toward intelligent transport networks. This encompasses the development of related standards for customer premises, access, metropolitan and long-haul sections of communication networks.



Greg JONES
Counsellor of SG4 and SG15

Study Group 16: Multimedia terminals, systems and applications

Lead Study Group on multimedia terminals, systems and applications

Lead Study Group on ubiquitous applications ("e-everything", such as e-health and e-business)

Responsible for studies relating to multimedia service capabilities and application capabilities (including those supported for NGN). This encompasses multimedia terminals, systems (e.g. network signal processing equipment, multipoint conference units, gateways, gatekeepers, modems and facsimile), protocols and signal processing (media coding).



Simão CAMPOS
Counsellor of SG6 and SG16

Study Group 17: Security, languages and telecommunication software

Lead Study Group on telecommunication security

Lead Study Group on languages and description techniques

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

(Counsellor: Mr Georges SEBEK, photo page 12)

Study Group 19: Mobile telecommunication networks

Lead Study Group on mobile telecommunication networks and for mobility

Responsible for studies relating to network aspects of mobile telecommunication networks, including International Mobile Telecommunication 2000 (IMT-2000) and beyond, 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.



Tatiana KURAKOVA
Engineer of SG19

TSB Director's Ad Hoc IPR Group

The TSB Director's Ad Hoc Group on Intellectual Property Rights (IPR) is responsible for studies relating to ITU-T patent policy and its guidelines for implementation, software copyright guidelines, and their associated issues. The membership of the group is open to all ITU-T and ITU-R members. Non-members can participate in meetings/reflector discussions at the invitation of the TSB Director.

TSB has set up a common FTP area within the Ad Hoc Group web page www.itu.int/ITU-T/othergroups/ipr-adhoc, which is accessible to participants who are non ITU-T members but are involved in the work of this group. To use this facility, it is necessary to subscribe electronically.

(Engineer: Mr Masamichi NIJYA, photo page 10)

TSB Workshops, SDO Coordination and Promotion Division (WSP)

Within TSB, the WSP Division deals with the promotion of ITU-T, providing awareness of the Sector's achievements and outreach to industry, other forums and standard development organizations (SDOs) and media. WSP also produces the ITU-T e-Flash. This is a regular update on some of the activities of the Telecommunication Standardization Sector of ITU. It contains a snapshot of the Sector's activities and links to upcoming events and other useful information. To receive this communiqué regularly, simply send an e-mail to ITU-T_e-flash@itu.int with SUBSCRIBE in the subject field.

Additionally, WSP is concerned with the organization of regular workshops both in and out of Geneva. These augment the work of the study groups by proposing new topics and progressing existing work areas. These events involve non-members and other regional and international standards developers, in the spirit of cooperation that is key to the success of ITU-T. Workshops cover a wide array of topics in the field of ICT and attract high-ranking experts as speakers, and attendees ranging from engineers to high-level management from all industry sectors. Events organized by ITU-T are free of charge and open to the public.

Keeping an Eye on New Technologies

Another activity of WSP is the Technology Watch, which aims to provide the study groups with information on emerging new technologies suitable for future standardization. In this way, ITU-T will ensure its pre-eminent role in standardization. Technology Watch is a new function of ITU-T established by WTSA-04.



Your TSB promotional support staff
From right to left

Paolo ROSA, Head of Division
Young Han CHOE, Technology Watch Engineer
Xiaoya YANG, Workshop Project Coordinator
Toby JOHNSON, Communications Officer
Stefano POLIDORI, JPO Engineer


Meetings, logistics and secretariat

The majority of ITU-T study group meetings are held in Geneva at the ITU headquarters, and TSB provides logistic and secretariat support. Each study group progresses its work electronically between meetings. This is done primarily using e-mail mailing lists, discussion forums and informal FTP areas. TSB provides Electronic Document Handling (EDH) services to facilitate the exchange of information and documents among participants in the work of ITU-T.

Operational Bulletin and TSON

A fortnightly operational bulletin is developed within TSB. This is a detailed update containing information that is required to maintain the global interconnection of the world's telecommunication networks. In particular, it contains information on changes to numbering and routing plans, whether at the national or international level.

Additionally the Telecommunication Services for Operation and Numbering (TSON) Division acts as registrar for value-added services such as universal international freephone numbers (UIFN), universal international premium rate numbers (UIPRN) and international shared cost numbers (ISCN).



From left to right

Mr Richard GREEN
Chairman SG9

Mr Pierre-André PROBST
Chairman SG16

Mr Brian W. MOORE
Chairman SG13

Mr Kishik PARK
Chairman SG3

Mr John VISSER
Chairman SG19

Mr Jean-Yves MONFORT
Chairman SG12

Mr Houlin ZHAO
Director of TSB

Ms Marie-Thérèse ALAJOUANINE
Chairman SG2

Mr Yoichi MAEDA
Chairman SG15

Mr Yukio HIRAMATSU
Chairman SG11

Mr Reinhard SCHOLL
Deputy to the Director of TSB

Mr Herbert BERTINE
Chairman SG17

Mr Roberto POMPONI
Chairman SG5

Mr David J. SIDOR
Chairman SG4

Mr Gary FISHMAN
Chairman TSAG

Mr Francesco MONTALTI
Chairman SG6



International Telecommunication Union (ITU)

Telecommunication Standardization Bureau (TSB)

Place des Nations

CH-1211 Geneva 20

Switzerland

Tel.: +41 22 730 5852

Fax: +41 22 730 5853

E-mail:

tsbdir@itu.int (Director of TSB)

tsbmail@itu.int (general enquiries)

tsbmembers@itu.int (for membership information)

tsbpromo@itu.int (for Technology Watch, workshops and promotional activities)

URL: www.itu.int/ITU-T

International Telecommunication Union (ITU)
Telecommunication Standardization Bureau (TSB)
Place des Nations
CH-1211 Geneva 20
Switzerland
Tel.: +41 22 730 5852
Fax: +41 22 730 5853