

ITU-T Review of the Year

From the Telecommunication Standardization Bureau (TSB), ITU

Introduction

2007 saw a restructuring of TSB to address the need to group similar activities, rationalize work processes and improve the capability of the Bureau to respond to the overall evolution of the work of the ITU-T Sector. Staff numbers have been reduced by three (-5%) for the 2008/9 budget.

In 2007, TSB organized and provided logistical and secretarial support for 85 meetings/workshops (59 in Geneva and 26 outside Geneva), representing a total of 339 meeting days (255 in Geneva and 84 outside Geneva). This represents an increase of 39% in the number of meetings with respect to 2006 (2006: 61; 2005: 54; 2004: 44; 2003: 27) and an increase of 29% in the number of meeting days with respect to 2006 (2006: 263,5; 2005: 265; 2004: 219; 2003: 163). So far during 2007 we have published 160 Recommendations (13% more than during 2006).

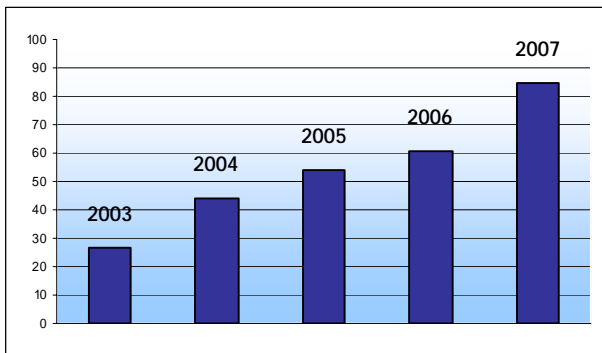


Figure 1: Meetings/workshops by year

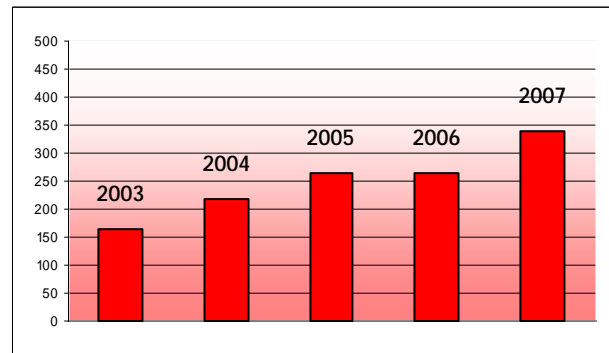


Figure 2: Number of meeting days by year

Council's approval of the ITU budget and therefore its approval of TSB's budget was a major achievement for 2007 giving us the impetus and confidence to move towards WTSA and a new study period on a firm financial footing. Clearly another major decision of Council 2007 – on free ITU-T Recommendations - will have a major impact on ITU-T and indeed the whole standards world. The following are some other highlights of 2007, starting with the Study Groups, the driving force of ITU-T.

1 Highlights of ITU-T Study Group work

1.1 SG 2 - Operational aspects of service provision, networks and performance

- Allocation of numerous numbering resources, including 888 to the UN for use in disaster relief.
- Work nearly completed on extra-territorial use of E.212 codes.
- Continued work on harmonizing numbering resources for child helplines and on harmonizing emergency numbers and services.
- Work in progress on calling party number delivery (identification of calling party), on definitions for numbering, and on numbering resources for next generation networks.
- Work completed for assessment of the running status of transport networks.
- Work nearly completed on definitions for quality of service, and for inter-provider quality of service.

1.2 SG 3 - Tariff and accounting principles including related telecommunication economic and policy issues

- Near conclusion of work on international mobile termination rates.
- Continuing work on International Internet Connectivity, network externalities, and international accounting rates.
- Near conclusion of work on NGN charging and accounting.
- Introduced a new accounting procedure and revised time-scales for settlement of account for international telecommunication services.

1.3 SG 4 - Telecommunication Management

- A series of Recommendations (M.1402-1405) which formalize data used in inter-operator communications for ordering of services and interconnections.
- Following a joint activity with the TeleManagement Forum, the M.3050 series specifying the eTOM (enhanced Telecommunications Operations Map) was updated.
- M.3020 revision was jointly developed with 3GPP SA5, so both organizations will have an identical management interface design methodology.
- NGN management was advanced by agreeing two C2B/B2B (customer to business/business to business interfaces) Recommendations.
- SG 4 continued liaison activities with SDOs and fora to develop one industry solution for network level management interface specifications. Further NGN management specification harmonization was proposed regarding XML design guidelines and ASON and Ethernet management with the TM Forum and other SDOs and forums.

1.4 SG 5 - Protection against electromagnetic environment effects

- Recommendation K.70 defines techniques which may be used by telecommunication operators to evaluate the cumulative (total) exposure ratio in the vicinity of transmitting

antennas and to identify the main source of radiation. EMF-estimator software is attached as a tool to support the application and explanation of this Recommendation.

- Recommendation K.71 provides information to Network Operators on when antennas can be installed in, or on, a customer building without performing a building specific risk assessment.

1.5 SG 6 - Outside Plant and related indoor installations

- ITU-T Recommendation L.66 gives maintenance criteria for in-service optical cable testing in the outside plant without disrupting normal network operation.
- Two Recommendations detail safety in high-power optical cables and protection of active electronics in outside plant.
- New in a series of Recommendations for the management of network elements in the outside plant is a document detailing the requirements for personal digital assistants (PDAs) as tools for inventory management.
- The Recommendation that defines the marking of optical cables used in shallow water, known as marinized terrestrial cables, has been brought up-to-date given the today's more widespread deployment of fibre.

1.6 SG 9 - Integrated broadband cable networks and television and sound transmission

- Draft Recommendation J.stb-spec adds Home Subscriber Server (HSS) functionality to the IP Cablecom 2 architecture. HSS provides mechanisms needed to support subscriber mobility and roaming.
- Recommendation J.700 defines service level requirements and an architectural framework for cable networks to provide new services based on Internet Protocol Television (IPTV).

1.7 SG11 - Signalling requirements and protocols

- Seven Recommendations on signalling protocols for QoS, resource control in NGN and NNI signalling in NGN. As a crucial part of the NGN standards package, they mark a significant step towards actual implementations of NGN.
- Six more Recommendations on NGN QoS and resource control, NGN testing, and Security Signalling Protocols for network attachment in NGN were consented in September 2007.

1.8 SG 12 - Performance and quality of service

- A Recommendation that provides a way to give consistency to performance measurements in high layer protocols such as FTP, HTTP etc.
- A revised workplan for some of the Questions in SG 12 will include specific mentions of IPTV Quality of Experience (QoE) and Quality of Service (QoS).
- The importance of the user's perception of audio quality was emphasized by improvements to several Recommendations related to the objective prediction of user opinion (P.862-series).
- SG12 continued to make significant progress on the migration of networks and services to being IP-based.

1.9 SG 13 - Next Generation Networks

- SG 13 progressed the development of a basic set of NGN Recommendations, prioritizing those relevant to NGN release 1. Collaboration for NGN standardization was further explored with new external partners such as OMA, IEEE, OASIS. Preliminary results were achieved on the proposal for studies during the next study period.
- Fourteen Recommendations were completed in 2007, nine of them are now approved. They cover areas such as requirements (NGN release 1 requirements, Y.2201), security (Security requirements for NGN release 1, Y.2701), OAM (OAM requirements and mechanisms for T-MPLS based networks, Y.1372 and Y.1373), QoS (QoS control architecture for Ethernet-based IP access networks, Y.2112), services (IMS based real-time conversational multimedia services over NGN, Y.2211; NGN convergence service model and scenario using web services, Y.2232) and fixed-mobile convergence developed jointly with SG 19.
- SG 13 is further coordinating the NGN work among study groups and relevant SDOs and reviewing the achievements of the dependent focus groups (OCAF, IPTV). An agreed plan was established by the JCA-IPTV for transferring the deliverables of the FG-IPTV to the relevant study groups after the last FG-IPTV meeting scheduled in December, after the TSAG meeting.

1.10 SG 15 - Optical and other transport network infrastructures

- Recommendation, G.984.5, defines wavelength ranges which are reserved for additional service signals to be overlaid via wavelength-division multiplexing (WDM) in future gigabit capable passive optical networks (G-PON).
- Work continued on a draft new Recommendation to develop a single international standard for home networking transceivers using any metallic media in the home – phonenumber wiring, data cable (e.g. CAT5), coaxial cable or powerline wiring.
- Work on ITU-T Rec - G.hn - next generation home networking transceivers - has now attracted a critical mass of contributors/participants with nine companies submitting 20 contributions on various topics. It is anticipated that G.hn will be completed in 2008.
- Work started on a draft new Recommendation G.hnta on home network transport architecture.
- Another step towards all optical networks (AON) was achieved with the consent of the new Recommendation G.680. The Recommendation will allow operators to take optical add/drop multiplexers (OADMs) and photonic cross-connects (PXCs) from different vendors and integrate them in to an all optical network without having to add expensive optical/electrical/optical conversion (O/E/Os).
- An upgrade to a widely used specification for fibre optic cables will allow the simpler deployment of Gigabit Ethernet (GbE) in FTTH applications up to 500 m link distance. Recommendation G.651.1 allows for increased cable flexibility.

1.11 SG 16 - Multimedia terminals, systems and applications

- ITU-T's multimedia [Study Group 16](#) met in Geneva, July, with over twenty standards entering the final stage of ITU-T's approval process. The meeting saw record numbers of participants and contributions. Work on the use of tag-based identification (including RFID) for multimedia in particular saw great interest and progress.

- A substantial upgrade was made to H.264 with the addition of scalable video coding capability to this widely adopted advanced video coding standard, enabling it to deliver higher quality video over lossy networks (such as mobile and IP networks).
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- ITU-T SG 16 contributed to the organization of two events on accessibility. The first one was the BDT Seminar on the "Sharing experience on best practices and services for people with disabilities, Geneva, 17 September 2007 (where various SG16 provided speakers attended) and the other was the Internet Governance Forum (IGF) "Making Accessibility a Reality in Emerging Technologies and the Web", Rio de Janeiro, 12-16 November 2007. It also provided presentations at the joint ITU and WHO Regional Conference on "Sharing experience on best practices and services for persons with disabilities" (Cairo, 13-15 November 2007).
- A new Question to advance work on the third generation multimedia system that will eventually replace the currently used H.323 has started work (pending formal approval at the next meeting of Study Group 16).
- A new Question on multimedia application platforms and end systems for IPTV has started work (pending formal approval at the next meeting of Study Group 16).

1.12 SG 17 - Security, languages and telecommunication software

- Study Group 17 initiated TAP for three Recommendations on cybersecurity (overview of cybersecurity, X.1205; vendor-neutral framework for automatic notification of security related information and dissemination of updates, X.1206; guidelines for telecommunication service providers for addressing the risk of spyware and potentially unwanted software, X.1207). Work in this area will establish a definition of cybersecurity that is wide enough in scope to cover various and sometimes inconsistent definitions.
- Study Group 17 developed jointly with ISO/IEC three Recommendations| International Standards in 2007 on multicast protocol specification (relayed multicast protocol: specification for simplex group applications, X.603.1; enhanced communications transport protocol specification: duplex multicast transport, X.607; N-plex multicast transport, X.608).
- Study Group 17 approved 22 security Recommendations in 2007 on areas include network security (password-authenticated key exchange protocol, X.1035), home network security (framework of security technologies, X.1111; guideline on user authentication mechanism, X.1113), mobile network security (differentiated security service, X.1123; authentication architecture, X.1124), web security (security architecture for message security in mobile web service, X.1143), telebiometrics (telebiometrics related to human physiology, X.1082), secure application service (guideline on secure password-based authentication protocol with key exchange, X.1151), alert/incident reporting (common alerting protocol, X.1303).
- Study Group 17 completed five Recommendations on language and description techniques in 2007 (data architecture, Z.601; guidelines for UML profile design, Z.119; registration and application of PER encoding instructions, X.695; generic applications of ASN.1 – Fast Infoset security, X.895; use of UML for ODP system specifications, X.906), revised and extended the TTCN-3 specifications into eight Recommendations (Z.161-166, Z.168 and Z.170).

- Study Group 17 established the Focus Group on Identity Management (FG IdM) at its 6-15 December 2006 meeting. FG IdM conducted six face to face meetings from December 2006 until September 2007 and produced five deliverable reports. In its September 2007 meeting, Study Group 17 decided to immediately transfer the work of FG IdM into the appropriate Study Group activities in a coordinated fashion and recommended to TSAG its approval of a JCA-IdM and IdM-GSI at December 2007 TSAG meeting (see TSAG TD 454).
- Further to the establishment of the JCA-CIT (Conformance and Interoperability Testing) in December 2006, initial coordination work on conformance and interoperability testing took place, mostly for NGN with SG 11 and SG 13. A tutorial on CIT was given to NGN-GSI participants at the September 2007 NGN-GSI event. Close coordination is also ongoing with ETSI.
- Initial discussions with Sintasio, an organization in Slovenia providing an NGN interoperability test site, have taken place to consider what further collaboration of mutual interest could be achievable.

1.13 SG 19 - Mobile telecommunication networks

- Recommendation Q.1762 / Y.2802 describes the considerations for FMC, including the fundamental characteristics, service requirements, network capabilities, approach, scenarios and the relevant network environments.
- Recommendation Q.1763/Y.2803 goes further into the details and provides an example of the implementation of the converged service. It defines the service features, service architecture, and capability requirements of the convergence service between legacy PSTN and ISDN and mobile networks.
- SG 19 continues its work on series of Q.174X Recommendations going into the next layer of details describing operation of existing mobile systems.

2 ITU-T Focus Groups (FG)

- **FG IPTV:** The IPTV Focus Group will complete its work end of 2007, after having held seven meetings (plus electronic meetings). Thirteen working documents have been initiated covering IPTV requirements, architecture, QoS, security, digital rights management (DRM), middleware and home networks and will be submitted to the SG13 meeting in January 2008. FG IPTV benefited from collaboration with other SDOs, especially ATIS IPTV Interoperability Forum (IIF), DSL Forum and the Home Gateway Initiative (HGI), and it has a working relationship with DVB project and ETSI TISPAN. FG IPTV captured vast number of requirements covering home network, metadata, middleware, public interest, QoS/QoE, security, unicast and multicast.

An IPTV-GSI modelled on the arrangements already in place for the NGN is being formed: the ongoing work on the outputs from the IPTV Focus Group will be done by the study groups but with coordinated planning of the activities and through co-located meetings of the involved Rapporteur groups to progress the work.

- **FG IdM:** Completion of four deliverables and recommendation by [Study Group 17](#) to TSAG that a Global Standards Initiative on Identity Management (IdM-GSI) be established as well as a related Joint Coordination Activity (JCA).
- **FG From/In/To Car Communication:** 1st meeting in January 2007. Work has progressed over a number of meetings, on draft Recommendation - P.Carhft - under development by ITU-T's [Study Group 12](#). While first concentrating on narrowband speech (3.4kHz), the

group working under new banner - FitCarCom - will move into better quality - wideband (8kHz).

- **FG Security Baseline for Network Operators:** Deliverable approved by SG 17 X.800SerSup1 Supplement 1 to X.800-X.849 series on security: Security baseline for network operators. Group's work completed.
- **NGN M FG:** Publication of latest version of the NGN Management Specification Roadmap that identifies the various existing, or work-in-progress specifications relevant to NGN management. These specifications are not all ITU-T Recommendations, but also come from other standards making bodies with expertise in defining management interfaces. An additional and important feature of the document is that it provides gap analysis, identifying areas where standards are still needed, and also identifies overlapping specifications requiring harmonization.
- **FG OCAF:** Proposals for a Carrier Grade Open Environment (CGOE) Model embraced by Q16/13 and enhanced prior to its adoption as Recommendation Y.2901. Charter extended until January 2008, i.e., the next Study Group 13 meeting. Note that Q.16/13 has a set of 25 texts in progress that are coming from the FG-OCAF.

3 Regional groups

- The first meeting of the Regional Group of [Study Group 2](#) in the Arab region took place on 26th March 2007 in Sharm El Sheikh, Egypt. The objective of the Regional Group is to facilitate the involvement of developing countries (DC) in SG2 standardization activities, reflection of needs of developing countries and requirements in SG2 questions, to promote the implementation of SG2 Recommendations, and to increase awareness of developing countries with SG2 standardization areas.
- The SG3 regional tariff groups for, respectively, Africa, Asia-Pacific, and Latin America, each met once per year, as in the past. They analysed regional tariff data and prepared inputs to SG3, including draft recommendations.
- In order to develop Latin American regional groups of SGs 5 and 6 several actions were initiated, mainly to encourage Latin American delegates to take part in the tasks under consideration.

4 Workshops and Seminars (see also TSAG TD 492)

- During this period, the following workshop and seminar events were organized including:
 - a. [Standardization and Development of Next-Generation Networks for the Arab Region](#), 29 April-2 May, Bahrain
 - b. [The Fully Networked Car](#), at the [Geneva Motor Show](#), March
 - c. [Joint ITU-T/IEEE workshop on Carrier-class Ethernet](#), Geneva, 31 May-1 June
 - d. Workshop "[Satellites in NGN?](#)", Montreal, Canada, 13 July
 - e. Workshop on [Multimedia in NGN](#), Geneva, 10-11 September 2007
 - f. ITU/CITEL-PCC.I Seminar on "[Bridging the Standardization Divide](#)", Mendoza, Argentina, 24 September 2007
 - g. Joint ITU-T SG 17, ISO/IEC JTC 1/SC 27/WG 5 and [FIDIS Workshop on Identity Management Standards](#), Lucerne, Switzerland, 30 September 2007
 - h. [WSC - Workshop on Transit Security](#), Gaithersburg, USA, 4-5 October 2007

- i. [Making Accessibility a Reality in Emerging Technologies and the Web](#), Rio de Janeiro, Brazil, 13 November 2007. During the [Internet Governance Forum](#) meeting.
 - j. [Towards International Standards for a Truly Multilingual Global Internet](#), Rio de Janeiro, Brazil, 13 November 2007. During the [Internet Governance Forum](#) meeting.
 - k. [The global culture for cybersecurity](#), Rio de Janeiro, Brazil, November 2007 (during the [Internet Governance Forum](#) meeting)
 - l. [Human exposure to electromagnetic fields \(EMFs\)](#)
Geneva, 20 November 2007
- A call for abstracts has been issued for ITU, ISO and IEC's now regular event focusing on information and communication technologies (ICT) in motor vehicles. For the third year running [The Fully Networked Car](#) will take place at the Geneva International Motor Show, the event will comprise a workshop with demonstrations and will take place between 5 and 7 March 2008. A new topic area for 2008 is ICT and climate change, with an exhibit planned centred tentatively around the Honda Earth Formula 1 car. The 2008 event will feature keynote speeches from Max Mosley, president of the FIA (Fédération Internationale de l'Automobile) which is also the organizer of the Formula One World Championship) as well as Michel Mayer, CEO of Freescale Semiconductor.

5 Bridging the Standardization Gap (see also TSAG TD 470)

- ITU-T and ITU-D are working together to implement [PP-06 Resolution 123](#) on [Bridging the Standardization Gap](#) between developed and developing countries.
- A [Circular Letter](#) has been sent to the membership seeking contributions to a voluntary fund to help bridge the standardisation gap ([WTSA-04 Resolution 44](#)). A contribution of 30,000 EUR has been gratefully received from Nokia Siemens Networks.
- [Background document](#) has been prepared setting out a baseline of statistics for measuring the gap and assessing future progress
- The government of Rwanda generously hosted ITU's first ever global Forum on [Bridging the ICT standardization and development gap between developed and developing countries](#), in Kigali, Rwanda, 2-4 October. Participants welcomed the recent establishment of the special fund for voluntary contributions from world governments and industry to address the issue. Over 160 participants from 38 countries took part in the meeting, with several countries being represented at government Minister, head of regulatory body, or company CEO/CTO level. The conclusions of the Forum, outlining the importance of addressing the standardization gap, were provided as input to the [Connect Africa](#) summit held in Kigali, 29-30 October.
- Planning has started for one Forum – Bridging the Standardization gap – for each region before October 2008. Forums will address manufacturers, operators, service providers, regulators and administrations; providing an overview of technologies that have created major standardization challenges such as NGN, multimedia, VoIP, IPTV, security and regulation; and highlighting ways and means to enhance cooperation and participation in ITU's standardization work and assist standards implementation in developing countries.
- Progress was made in the development of the QoS flagship Group, (created under SG12 in June 2006), the updated Action Plan can be found in TD465 (TSAG).

6 Remote participation trial

Intelligent remote collaboration software (Webex) kindly offered by [Cisco](#) will allow regional (or sub-regional) meetings to participate remotely in ITU-T meetings held in Geneva or other parts of the world through an audio/video link and therefore allow developing countries to more easily participate in the standards making process.

7 Global Standards Symposium (GSS)

Planning for GSS to be held one day before next ITU World Telecommunication Standardization Assembly (WTSA-08), in South Africa, on 20 October 2008 is underway (see TSAG TD 471). The GSS will have two main topics: (a) Bridging the standardization gap; (b) collaboration among stakeholders to achieve this objective. See: [TD471](#).

8 Implementation guidelines

As a response to the call of developing countries for implementation guidelines and tutorials to assist them with the implementation of ITU-T Recommendations, the TSB Director has launched the process of drawing up a list of suitable texts and the investigation into outsourcing their translation. A tutorial on fibre optics is planned to be held in Kigali in first quarter 2008.

9 WTSA Preparatory meetings and regional forums

WTSA-08 preparatory meetings have started in the regions, and the TSB Director attended ASTAP-12 (March 2007, Bangkok, Thailand), the CITELE PCC.1 meeting in Argentina (October 2007), and ASTAP-13 (October 2007, Chiang Mai, Thailand). A full set of regional forums will be organized in 2008 jointly between ITU-T and ITU-D, with meetings being co-located where possible with regional preparatory meetings for WTSA-08. The tentative schedule is as follows:

- 19-23 May 2008, for Americas region, in Brasilia, Brazil;
- 26-30 May 2008, for Africa region, in Accra, Ghana;
- 28-31 July 2008, for Arab States region, in Damascus, Syrian Arab Republic;
- 15-17 September 2008, for Asia-Pacific region, in conjunction with APT regional preparatory meeting (venue to be confirmed);
- In summer 2008, for CIS region, provisionally in Tashkent, Uzbekistan.

10 Free online access for ITU-T Recommendations (see also TSAG TD 474)

- Council 2007 took a historic decision: [ITU-T Recommendations](#) in PDF form are now available online without charge, following a highly successful trial conducted from January – September 2007, during which some two million ITU-T Recommendations were downloaded throughout the world (see TSAG TD 474).
- The Greek Ministry of Transport & Communications asked that it be allowed to translate ITU Recommendations into Greek, produce and sell them, and ITU responded positively.

11 Collaboration

- **WSC (World Standards Cooperation):** ITU, ISO (International Standardization Organisation) and IEC (International Electrotechnical Commission) conducted and achieved the work of aligning the Patent Policy, the associated Declaration forms and the Guidelines.

The [Common Patent Policy](#) replaced the ITU-T Patent Policy in June 2006; the new Forms and the Guidelines came into effect in March 2007. Other joint efforts (Standardization Management Course, workshops and common initiatives to promote the standards culture in academia) are underway. WSC meets annually (next February 2007), and the CEOs of ISO and IEC and the TSB Director have regular informal meetings to advance joint projects. The TSB Director also participated at the General Assembly of ISO and spoke at the opening, and attended IEC's General Assembly.

- **GSC (Global Standards Collaboration):** The TSB Director headed the ITU delegation at GSC-12, hosted by TTC and ARIB in Japan (see TSAG TD 468).
- The TSB Director attended the **ETSI** General Assembly, the 15th anniversary of **ETNO** (European Telecommunications Network Operators' Association) and a meeting of the "Fireworks" group, and he visited the **European Commission** in Brussels.
- **3GPP:** ITU-T has started to participate again, after a pause of several years, in the meetings of 3GPP/OP (Organizational Partners), 3GPP's highest decision making body, and 3GPP/PCG (Project Co-ordination Group), the group responsible for overall time-frame and management of the technical work. The Deputy to the Director of TSB attended 3GPP/PCG#18 & 3GPP/OP#17 on 17-19 April 2007 where an agreement was reached to implement an iterative process directly between ITU-T and 3GPP. ITU-T offered to host meetings of 3GPP SA 1 (whose work includes IMS, the IP Multimedia Subsystem) and of 3GPP Plenaries; 3GPP gladly accepted this offer.

The TSB Director has also put forward the idea of 3GPP becoming a Focus Group of ITU-T. Another idea suggested is that ITU-T becomes a partner in 3GPP. Both ideas are intended to incorporate the work of 3GPP more closely with ITU-T.

- **IEEE ComSoc (Communication Society):** Work on an MoU which covers joint events planning is almost finalized.
- **IETF:** ITU-T / IETF Leadership gathered on 21 July 2007 in Chicago, USA. The main objective of the meeting was to get to know each other in an informal atmosphere such that future collaboration liaising would be more effective and fruitful. The ITU delegation was led by Deputy Director TSB and comprised 14 people, 13 from ITU-T and one from ITU-R; on IETF-side there were close to 30. The following items were discussed in depth: (a) How can ITU-T efficiently request registration from IANA; (b) T-MPLS; (c) Quality of text of standards; (d) Architecture requirements: how to make sure that they have been fulfilled; (e) Coordination of work items.
- **Internet Governance Forum (IGF)** (see TSAG TD 497): ITU participated at the 2nd IGF in Brazil (12-15 November 2007) and organized:
 - a 90-minute ITU Open Forum session on "Can we win the war against cyber-threats";
 - a 90-minute thematic workshop on "Towards international standards for a truly multilingual global Internet", jointly with UNESCO and ICANN;
 - a 90-minute ITU thematic workshop on "Making accessibility a reality in emerging technologies and the web".

Among the ITU-T standardization topics presented were ITU-T's work on cybersecurity, especially the work of ITU-T SG 17, and ITU-T SG 16's work on accessibility. ITU collaboration with other stakeholders especially ICANN was much improved.

- **E-Business MoU between IEC, ISO, ITU and UN/ECE:** ITU-T continues to participate

actively in the work of this group.

- Annually, in rotation, ETSI, ITU-T and W3C appoint one non-voting liaison (TLG, Technical Liaison Group) to the **ICANN Board**. Starting November 2007, the Deputy to the Director of TSB has taken the seat on the ICANN Board.

12 Cooperation between ITU-T and universities (see TSAG TDs 434 and 496)

- ITU-T held a [Consultation meeting on cooperation between ITU-T and Universities](#), Geneva, 18 and 19 January 2007, to explore ways to improve cooperation between the ITU standardization sector and universities. There was also discussion on how ITU-T can become better known to students and how to make it easier for academia to participate directly in ITU-T work. The ensuing ITU-T and academia informal group discussions (monthly conference calls) mark a good starting point.
- A call for papers was issued for [Innovations in Next Generation Networks](#) is the first in a series of peer-reviewed academic conferences – 12-13 May 2008 that aims at increasing the dialogue between academia and experts working on the standardization of ICTs. About 140 paper proposals were submitted (75% from academia) and will undergo a review process by about 80 expert reviewers from academy, research and industry. The best papers will be presented at the event.

13 International Telecommunication Regulations

- A Director's [Expert Group to Review the International Telecommunication Regulations \(ITRs\)](#) has been created and held its first meeting in October 2007. The ITRs are an international treaty whose purpose is to promote the development of telecommunication services and their most efficient operation while harmonizing the development of facilities for worldwide telecommunications.

14 Quality of Recommendations

- TSB is in the process of appointing an engineer editor to help improve the quality of English text of ITU-T Recommendations. The position is to start in the first quarter of 2008.

15 Technology Watch (see also TSAG TD 472)

- In June 2007, the Technology Watch function became part of the new Telecommunication Standardization Policy Division of the TSB.
- In October 2007, a new series of Technology Watch Briefing Reports were launched. The reports are intended to provide an up-to-date assessment of promising new technologies in a format that is accessible to non-specialists. To date, three reports - Intelligent Transport Systems and CALM; Telepresence: High-performance video-conferencing; ICTs and Climate Change - have been published and more are in the pipeline.

16 ITU-T website and ITU-T's web presence (see TSAG TD 493)

- The whole of the ITU website has migrated to a new template with a significant change in look and feel. Translation of key pages into the six languages is underway and due for completion by end 2007.

- ITU-T's presence on the web has been greatly improved, and various articles in Wikipedia have been updated.
- At the request of SG11, [an online database of SANC/ISPCs](#) was developed and will soon be put into production.

17 Numbering resources

- Twenty-four Operational Bulletins were published in 2007. Thirteen annexes on the lists of codes and numbers have been published in 2007. The number of registrations for universal international freephone numbers (UIFNs) is around 1,800 per year; around 31,000 UIFNs are assigned and in service as of October 2007.
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