

ITU-T structure and working methods

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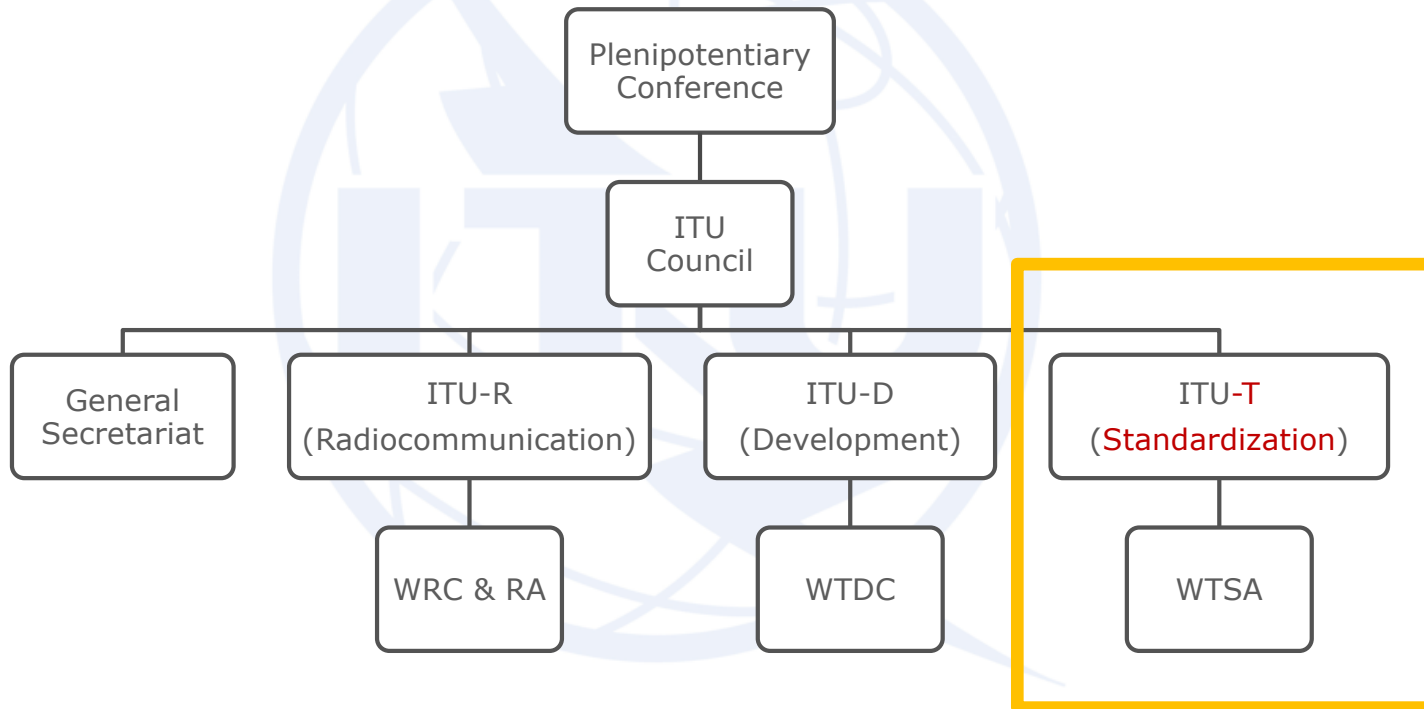
ITU-T Study Group Advisor

Telecommunication Standardization Bureau

International Telecommunication Union



ITU macro structure





ITUW TSA

World Telecommunication Standardization Assembly

Adopts working methods and procedure for the management of the sector's activities

Addresses strategic issues in standardization



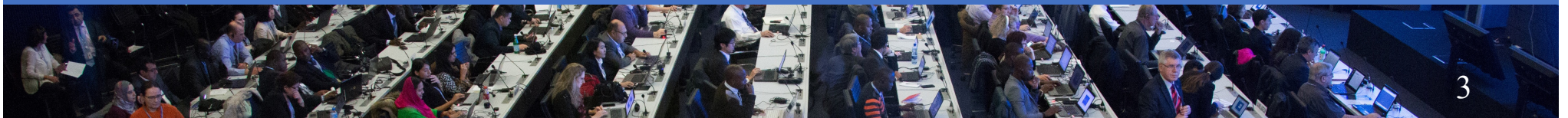
Every 4 years



8-day conference preceded by 1 day of
Global Standards Symposium



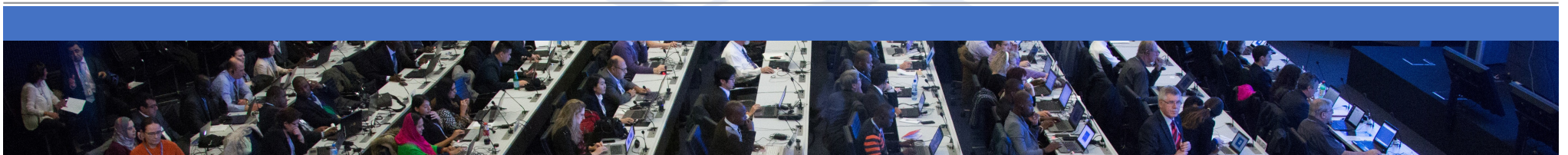
+700 participants



ITU WTSA at a glance



- WTSA meets at 4 year intervals
- Sets direction/structure of ITU-T
- Establishes the study group structure
- Approves their work program
- Appoints their chairmen and vice-chairmen
- Creates and approves WTSA Resolutions





Highlights from World Telecommunication Standardization Assembly (WTSA-16)

- 25 October – 3 November 2016, Hammamet, Tunisia.
- 700+ representatives, 92 Member States participating
- Resolutions and Recommendations:
 - Revised 31 Resolutions,
 - adopted 16 new Resolutions on topics ranging from 5G systems to mobile roaming, IoT and smart cities, open source, and cloud-based event data technology,
 - suppressed 6 Resolutions,
 - revised 3 ITU-T A-Series Recommendations,
 - and approved 5 ITU-T Recommendations from SG3.
- Approved the mandates (including Questions) of the eleven ITU-T study groups, and appointed their Chairman and Vice-Chairmen.
-
- WTSA-16 snapshot report at: <https://www.itu.int/en/ITU-T/wtsa16/Documents/WTSASnapshotReport.pdf>
- Draft WTSA-16 Proceedings (excl. speeches, summary records, meeting reports of Committees) at: https://www.itu.int/en/ITU-T/wtsa16/Documents/WTSA16_Draft_Proceedings_E.pdf



ITU-T Study Groups

ITU-T Study Group	Title
2	Operational aspects of service provision and telecommunication management
3	Tariff and accounting principles and international telecommunication/ICT economic and policy issues
5	Environment, climate change and circular economy
9	Television and sound transmission and integrated broadband cable networks
11	Signalling requirements, protocols, test specifications and combating counterfeit products
12	Performance, quality of service and quality of experience
13	Future networks, with focus on IMT-2020, cloud computing and trusted network infrastructures
15	Networks, technologies and infrastructures for transport, access and home
16	Multimedia coding, systems and applications
17	Security
20	Internet of things (IoT) and smart cities and communities (SC&C)



WTSA Resolutions in force

61 in total

14 WTSA-12 Resolutions/Opinion Unchanged

16 new Resolutions adopted in WTSA-16

WTSA-12 Resolutions

- 13 (+ 1 Opinion) unchanged
- 5 editorially changed
- 26 (substantively) revised

Note: 6 WTSA-12 Resolutions were suppressed by WTSA-16



Suppressed Resolutions

Resolution 33 – Guidelines for ITU-T strategic activities

Resolution 38 – Coordination among ITU-T, ITU-R and ITU-D for activities relating to IMT

Resolution 57 – Strengthening coordination and cooperation among ITU-R, ITU-T and ITU-D on matters of mutual interest

Resolution 71 – Admission of academia to participate in the work of ITU-T

Resolution 81 – Strengthening collaboration

Resolution 82 – Strategic and structural review



Resolutions/Opinion unchanged

- Resolution 31 – Admission of Associates in the work of ITU-T
- Resolution 34 – Voluntary Contributions
- Resolution 43 – Regional preparation for WTSAs
- Resolution 47 – Country code top-level domain names
- Resolution 48 – Internationalized (multilingual) domain names
- Resolution 58 – National CIRTs, particularly for developing countries
- Resolution 59 – Enhancing participation of telecommunication operators from developing countries
- Resolution 60 – Evolution of the identification/numbering system and its convergence with IP-based systems/networks
- Resolution 61 – Countering and combating misappropriation and misuse of international telecommunication numbering resources
- Resolution 62 – Dispute settlement
- Resolution 66 – Technology Watch in TSB
- Resolution 74 – Sector Members from developing countries in ITU-T
- Resolution 79 – E-waste
- Opinion 1 – Practical application of network externality premium



WTSA Resolutions with only editorial modifications

- Resolution 20 – Procedures for allocation and management of international telecommunication numbering, naming, addressing and identification (NNAI) resources
- Resolution 40 – Regulatory aspects of ITU-T work
- Resolution 54 – Creation and assistance to regional groups
- Resolution 69 – Non-discriminatory access and use of Internet resources
- Resolution 78 – E-health



New Resolutions (1/2)

- Resolution 83 – Evaluation implementation of WTSA Resolutions
- Resolution 84 – Protection of users of telecommunication/ICT services
- Resolution 85 – Strengthening and diversifying ITU-T resources
- Resolution 86 – Facilitating implementation of Smart Africa Manifesto
- Resolution 87 – ITU-T participation in periodic review and revision of ITRs
- Resolution 88 – International mobile roaming
- Resolution 89 – Promoting use of ICTs to bridge financial inclusion gap
- Resolution 90 – Open source in ITU-T
- Resolution 91 – Enhancing access to an electronic repository of information on numbering plans published by ITU-T



New Resolutions (2/2)

Resolution 92 – Enhancing the non-radio aspects related standardization activities in ITU-T on international mobile telecommunications

Resolution 93 – Interconnection of IMT-2020 networks and beyond

Resolution 94 – Cloud based event data technology

Resolution 95 – ITU-T initiatives to raise awareness on best practices and policies related to service quality

Resolution 96 – ITU-T studies for combating counterfeit telecommunication/ICT devices

Resolution 97 – Combating mobile telecommunication device theft

Resolution 98 – Enhancing the standardization of Internet of Things and Smart Cities & Communities for global development



Modified A-series

- A.1 – Working methods for study groups of the ITU Telecommunication Standardization Sector (ITU-T)
- A.12 – Identification and layout of ITU-T Recommendations

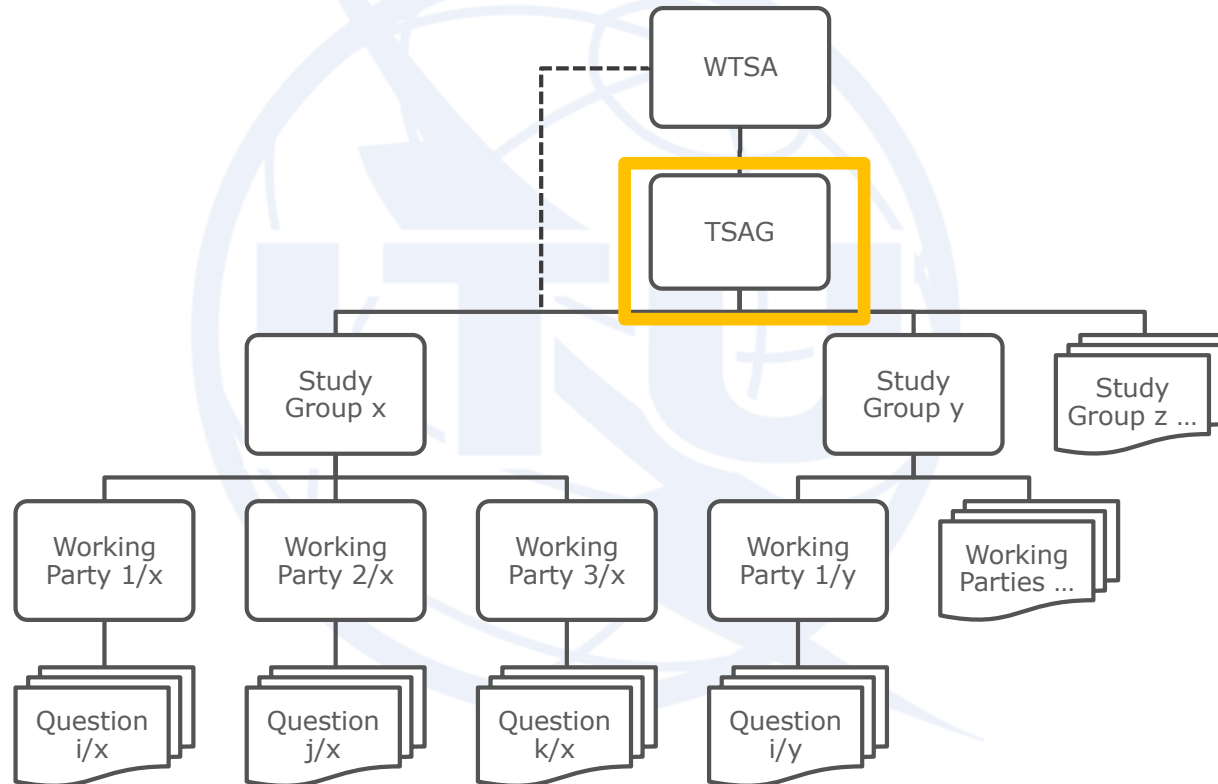


New ITU-T D-series Recommendations

- D.52 (new) – Establishing and connecting regional Internet exchange points to reduce costs of international Internet connectivity
- D.53 (new) – International aspects of universal service
- D.97 (new) – Methodological principles for determining international mobile roaming rates
- D.261 (new) – Principles for market definition and identification of operators with significant market power
- D.271 (revised) – Charging and accounting principles for NGN



ITU-T Structure: Study Groups





ITUTSAG

Telecommunication Standardization Advisory Group

*Acts as an advisory body to the study groups,
membership and staff of ITU-T*

*Responsible for working procedures and the
organization of the ITU-T work programme*



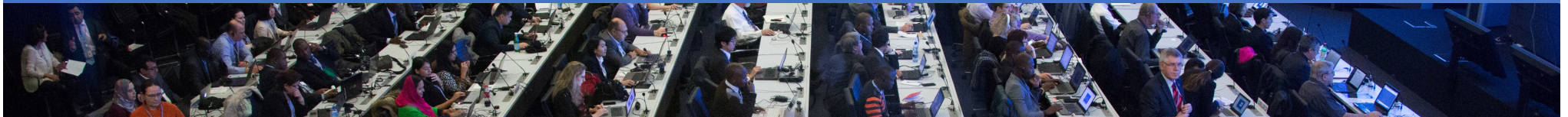
Every year



1-week group meeting



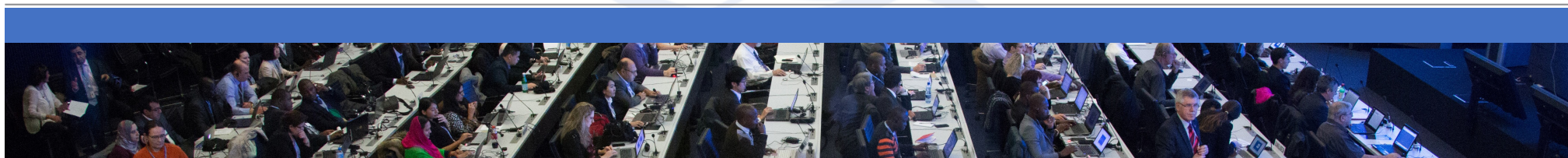
140 participants on
average



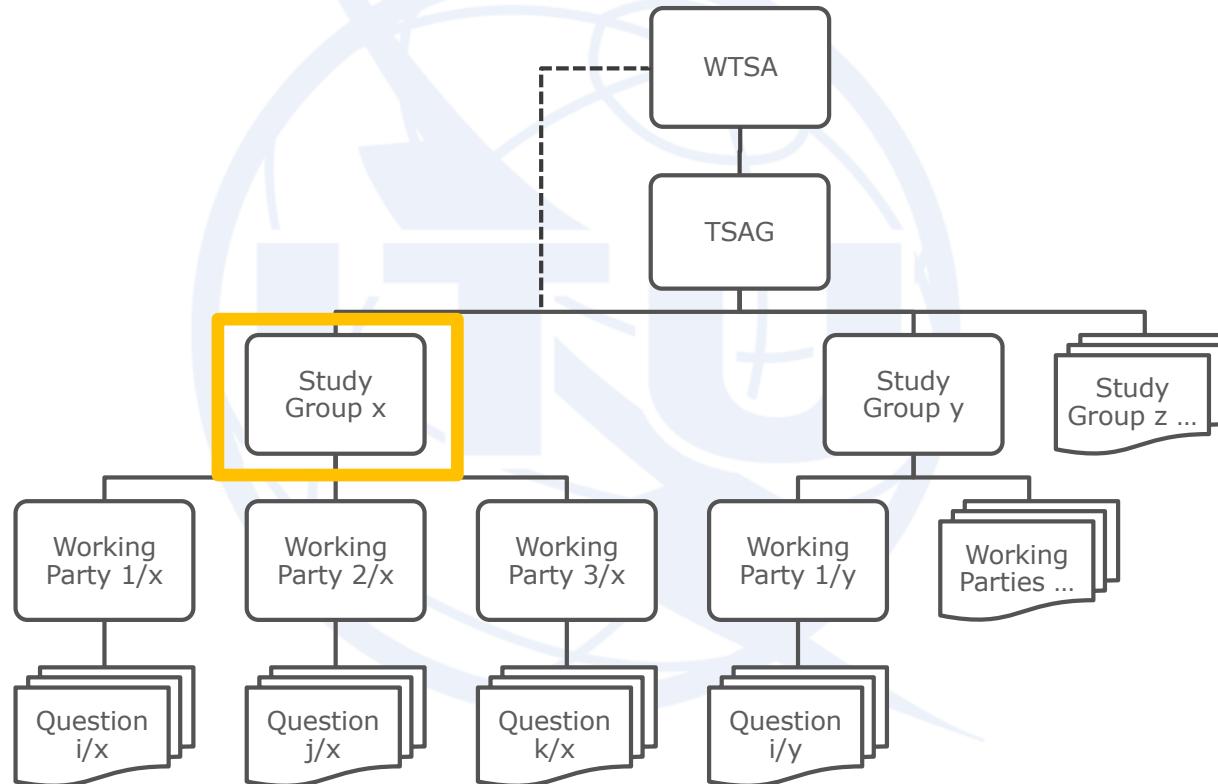
ITUTSAG at a glance



- Adapts ITU-T to changing requirements
- Monitors the activities of any joint coordination activities or terminates them, or establishes new coordination activities
- Reviews/improves ITU-T working methods
- Monitors the activities of lead study groups
- Monitors programmes of work across the study groups
- Follows up on items identified by WTSA (see WTSA-16 Res.22)



ITU-T Structure: Study Groups



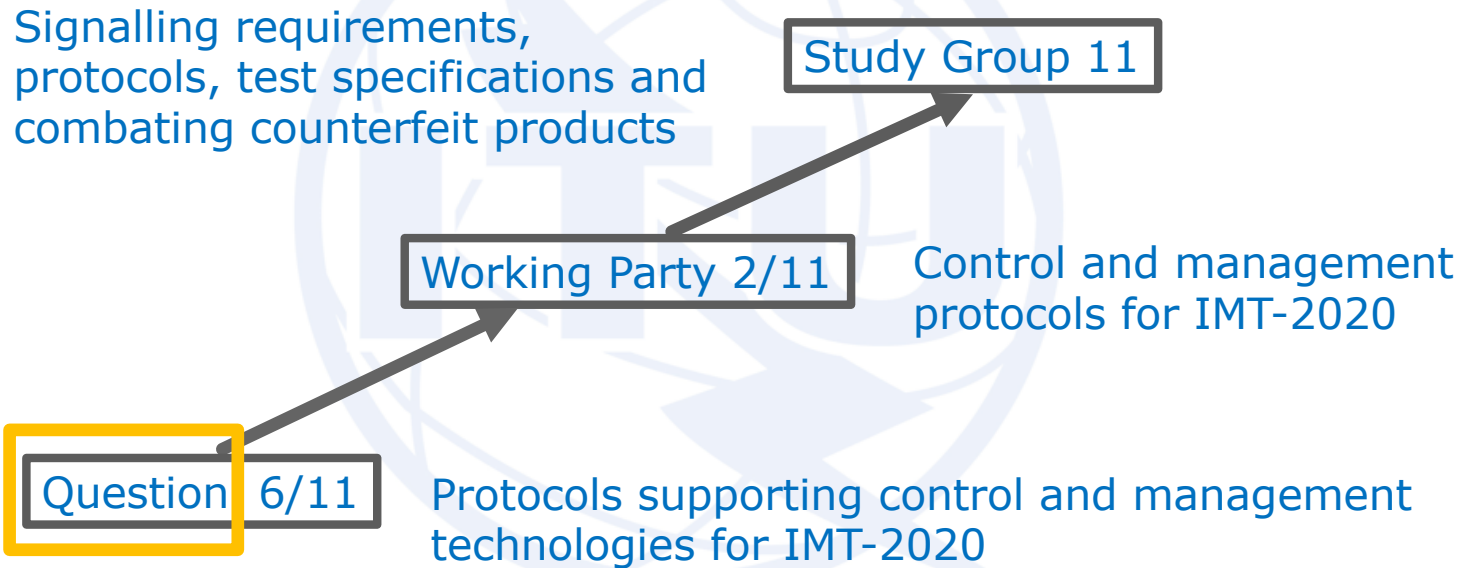
Ground work: Questions & Rapporteur Groups

- Similar to a project working on a specific area of knowledge
 - E.g. "Signalling requirements and protocols"
- Led by a technical expert – Rapporteur
 - Technical proposals from members
 - to the Rapporteur Groups
- Develops agreed work items (see later)
 - E.g. Q.SR-Trust "Signalling requirements and architecture for interconnection between trustable network entities"
- Reports to Working Party & Study Group



Study Group, Working Party & Question

An example



Study group management roles

- Study group Chairman (and Vice-Chairmen)
- Working party Chairmen (and Vice-Chairmen)
- Rapporteurs (and associate rapporteurs)
- Editors
- Delegates
- Representatives into other groups

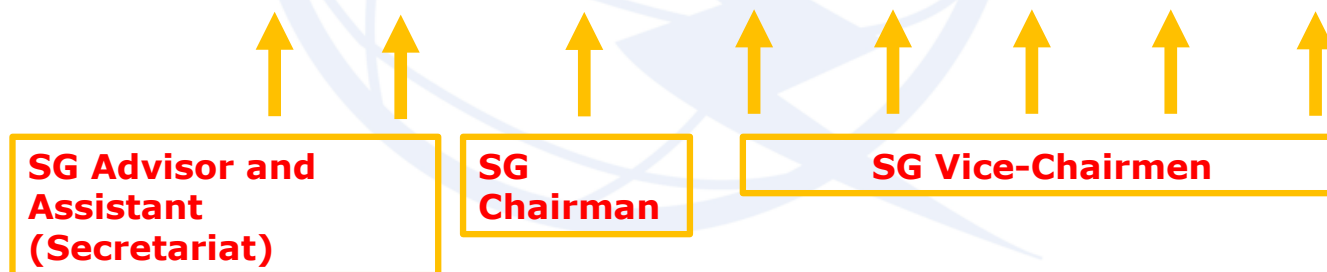
- Counsellor/Advisor
- Assistant



ITU-T SG Opening Plenary



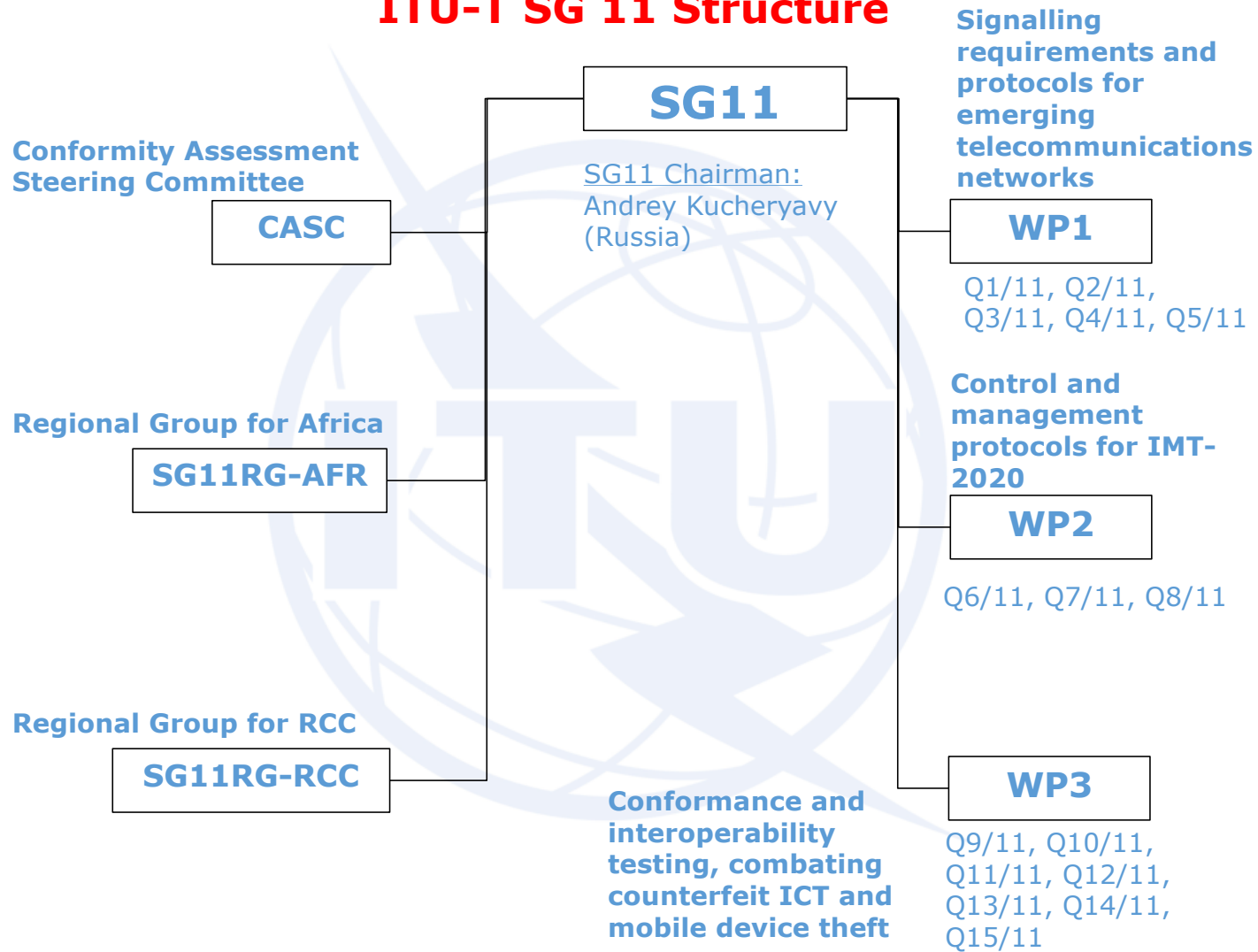
ITU-T SG Management Team



Example of regular ITU-T SG11 meeting



ITU-T SG 11 Structure



List of questions of ITU-T SG11

Question number	Title
Q1/11	Signalling and protocol architectures in emerging telecommunication environments and guidelines for implementations
Q2/11	Signalling requirements and protocols for services and applications in emerging telecommunication environments
Q3/11	Signalling requirements and protocols for emergency telecommunications
Q4/11	Protocols for control, management and orchestration of network resources
Q5/11	Protocols and procedures supporting services provided by broadband network gateways
Q6/11	Protocols supporting control and management technologies for IMT-2020
Q7/11	Signalling requirements and protocols for network attachment including mobility and resource management for future networks and IMT-2020
Q8/11	Protocols supporting distributed content networking and information centric network (ICN) for future networks and IMT-2020, including end-to-end multi-party communications
Q9/11	Service and networks benchmark testing, remote testing including Internet related performance measurements
Q10/11	Testing of emerging IMT-2020 technologies
Q11/11	Protocols and networks test specifications; frameworks and methodologies
Q12/11	Testing of internet of things, its applications and identification systems
Q13/11	Monitoring parameters for protocols used in emerging networks, including cloud computing and software-defined networking/network function virtualization (SDN/NFV)
Q14/11	Cloud interoperability testing
Q15/11	Combating counterfeit and stolen ICT equipment



Time Plan

Time plan for the ITU-T Study Group 11 meeting Geneva, 8-17 November 2017 (second week)

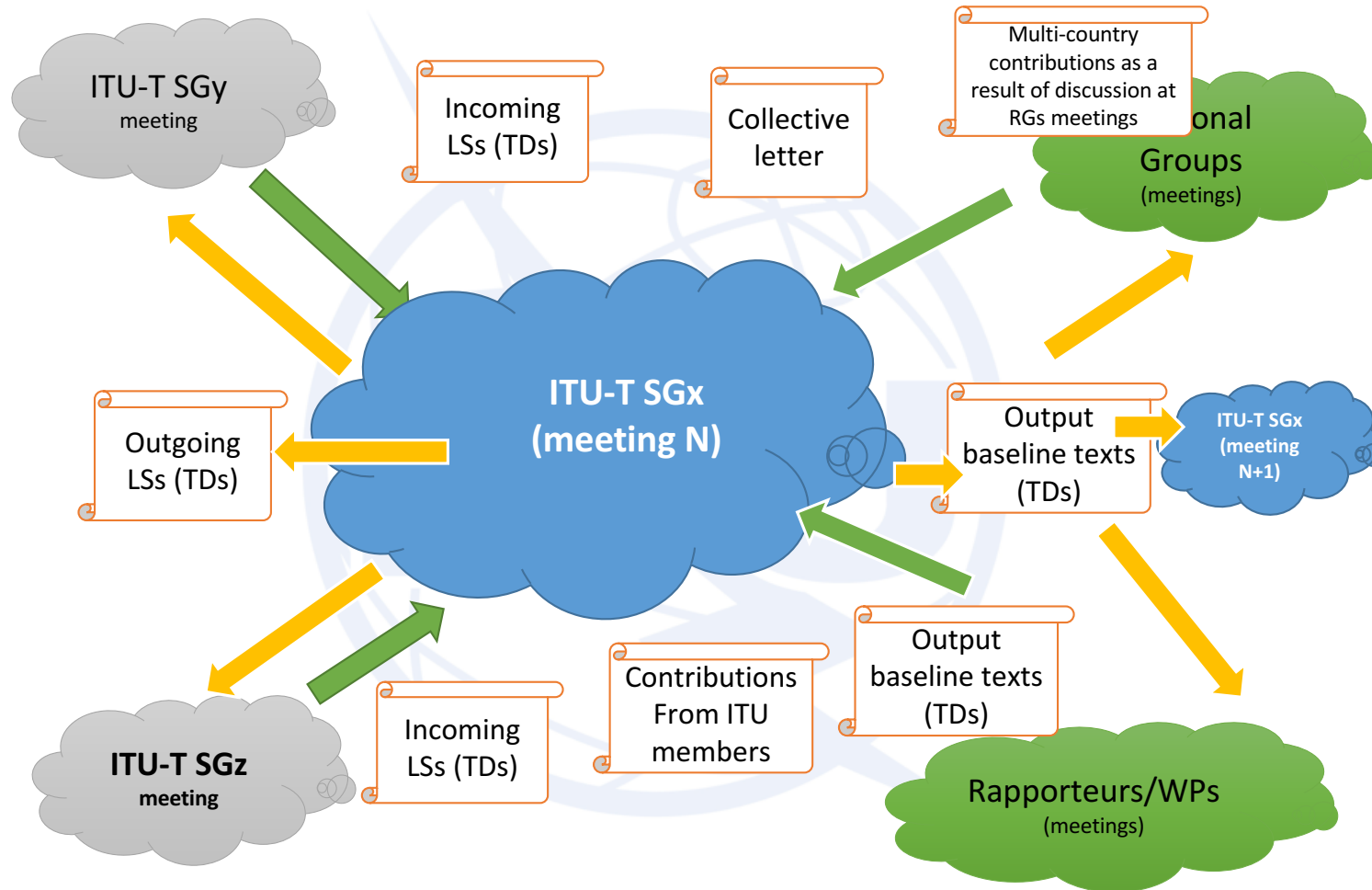
	Monday, 13 November					Tuesday, 14 November					Wednesday, 15 November					Thursday, 16 November					Friday, 17 November						
	0	1	2	Y	3	4	5	0	1	2	Y	3	4	5	0	1	2	Y	3	4	5	0	1	2	Y	3	4
SG11 PLEN																											
TSR																											
Newcomers																											
WP1/11 PLEN																											
Q1/11									X																		
Q2/11										3R		X															
Q3/11		R																									
Q4/11					R			R	R		R	R															
Q5/11					X	X																					
WP2/11 PLEN																											
Q6/11													X														
Q7/11		R	X										X	X													
Q8/11					X	X		X	X																		
WP3/11 PLEN																											
Q9/11					5R	5R																					
Q10/11								X	X																		
Q11/11													6R	6R													
Q12/11																											
Q13/11					X								X														
Q14/11		X	X					X	X																		
Q15/11		X	X		X	X		X	X		X	X															
CASC																											
ETSI TC INT	4	4	4	4			4	4	4	4				4	4	4	4	4									
SG11 WSHP																											

Sessions times: 0 - 0830-0930; 1 - 0930-1045; 2 - 1115-1230; Lunch (Lu) - 1230-1430; 3 - 1430-1545; 4 - 1615-1730; 5 - 1800-1915

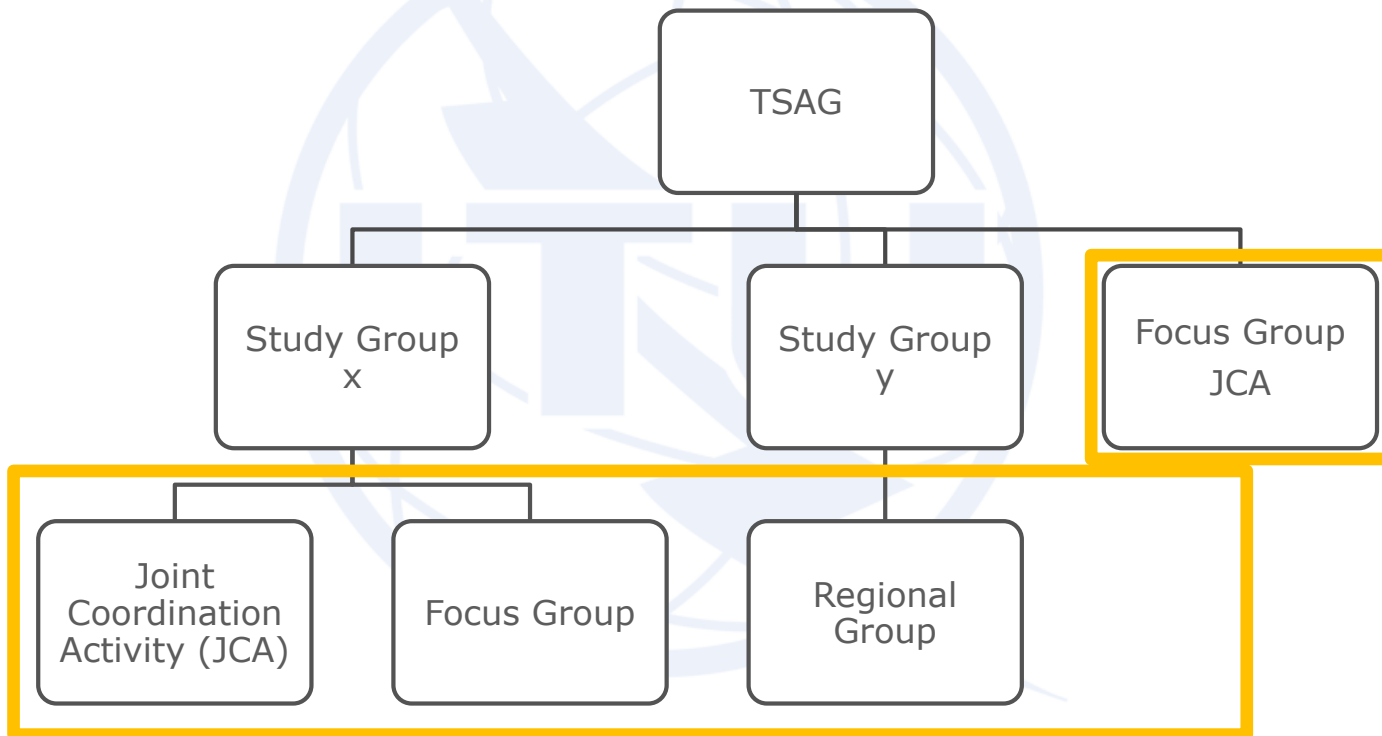
Key: - Webcast; R - Remote participation;



Example of the usual SG meeting



ITU-T Structure: Other Groups



Other types of groups

- Regional group (reporting to specific SG)
- Focus group (reporting to specific group)
- Intersector Rapporteur Groups (IRGs)
- Joint Coordination Activity (JCA)
- Collaboration on ITS Communication Standards
- Standardization Committee for Vocabulary (SCV)
- CTO Groups
- ITU/WMO/UNESCO IOC Joint Task Force
- Other groups
 - TSB Director's IPR Ad hoc Group
 - TSB Director's AHG on Education about standardization

(<http://www.itu.int/en/ITU-T/groups/Pages/default.aspx>)



Secretariat services

- **Key role:** facilitate standards development
- **Technical, procedural, and strategic advice**
 - Administrative support and technical knowledge
 - Interface with delegates, answer questions, requests etc.
- **Coordinate study group activities**
 - Manage meeting logistics
 - Document processing, printing and distribution
 - Assist SG Chairman and SG Management
 - Responsible for SG Meeting Reports
- **Ensure quality of output standards**



Coordination activities

Coordination plays a key role in ITU-T work

- **Cooperation with other organizations**
(Recommendations ITU-T A.4, A.5 and A.6)
- **Joint Coordination Activities (JCAs)**
- **Lead study groups**
- **Management team**
(Chairmen, rapporteurs, liaison officer, editors, counsellors)



Intellectual Property Rights (IPR)

- Legal rights that protect creations and inventions
- Any IPR needed to implement Recommendations must be disclosed
- Software Copyright Guidelines must be followed
- No trademarks allowed in Recommendations
- Common patent policy with ITU-R, ISO and IEC

(See: itu.int/en/ITU-T/ipr/Pages/policy.aspx)



Who can participate - Membership

Member States

Governments and regulatory bodies

Sector Members

Private sector and regional/international organizations

Associates

Private sector (focus on one study group)

Academia

Universities and research establishments

Invited experts

Very limited role – on exceptional cases, by invitation



A large, light blue watermark of the ITU logo is centered on the page. It features a globe with latitude and longitude lines, and the letters 'ITU' in a bold, sans-serif font overlaid on the globe.

ITU-T deliverables



Publications (1/2)

Main products: ITU-T Recommendations

- Recommendations are international standards
- Grouped into themed series
- Normative texts
 - Approved by members
- Voluntary by nature
 - Compliance only mandatory after adoption in law
- Developed at the request of membership
- Maintained through amendments, corrigenda and revisions



Publications (2/2)

Other publications (non-normative)

- Non-normative texts
 - Agreed by members
- Supplements
- Implementers' guides
- Technical Papers
- Technical Reports
- Focus groups deliverables
- Ad-hoc publications



Approval and agreement

- **Traditional approval process (TAP)**
 - Default method for international standards (Recommendations) with *regulatory or policy implications*
 - About 5% of all ITU-T Recommendations
 - Average approval time: *9 months*
- **Alternative approval process (AAP)**
 - Default method for *technical* Recommendations
 - Used for ~95% of ITU-T Recs
 - Approval time: *~9.5 weeks*
 - Electronic balloting via ITU website
- **Agreement**
 - Used for non-normative texts (supplements, technical papers, technical reports, guides, etc.)



Approval cycles - TAP

- **Determination** (at SG or WP meeting)
- **Member state notification & consultation** (>3 months)
- **Decision at physical meeting** (SG meeting)
 - Agreement to approve
 - A single member state can veto
- **WTSA**
 - As last resource



Approval cycles - AAP

- **Consent** (at SG or WP meeting)
- **Last Call (LC)** – 4 weeks
- **Review of comments (LJ)**
 - None or editorial – approved
 - Of substance: comments resolved
- **Additional Review (AR)** – 3 weeks
 - No comments – approved
 - Comments – sent to next SG meeting for review
- **WTSA**
 - Option when everything else fails



**Contributing to meetings
and
developing new work items**



Meeting preparation

Basic essential information

Before the meeting (or as early as possible):

- **TIES account:** Access to meeting documents and resources.
- **Website:** Useful information and contact details.
- **Collective letter:** Describes meeting arrangements.
- **Circulars:** Inform membership about important events.
- **Registration:** Done electronically via study group home page.

During the meeting:

- **Meeting room allocation:** Shown on monitors.
- **Wifi network:** "ITUwifi" – Password: itu@GVA1211.
- **Loan laptops:** request at helpdesk; signed off by counsellor.
- **Least developed countries:** Extra support available.



Types of meetings

- **Study Group meetings**
 - Coordinate activities, progress work items, start and complete approval process for texts
 - Webcasting and remote participation
 - Languages (interpretation and translation)
- **Working Party meetings**
 - Subset of roles from a SG meeting; most important: can *start* the approval process (TAP & AAP)
- **Rapporteur group (interim) & virtual meetings**
 - Progress work items
 - Less formal and flexible rules
- **Focus group meetings**
- **Location: virtual, at HQs or outside Geneva**



Various types of documents

- **Formal meeting documents**
 - **Contributions** [members-only]
 - Reports
 - **TDs** [management only]
 - Liaison statements [to/from groups]
- **Working documents**
- **Collective letters** (announcing SG meetings)
- **Circulars** (other announcements)



Work item development: inputs

- **Technical inputs from members**
 - Submitted via Contributions
- **Technical inputs from related groups**
 - Submitted e.g. via Liaison Statements, joint meetings, etc.
- **Electronic working methods**
 - Paperless (pervasive)
 - Possible: e-meetings, conference calls, remote participation, etc.



Work item life cycle: development

- **Proposals submitted by members**
 - Sometimes originated from a FG, workshop or technology watch reports
- **Work item development is done under a SG or TSAG**
- **Consensus building process**
 - Work item evolves as a result of an iteration process
 - Basic proposal modified by complementary proposals
- Experts in **rapporteur groups** develop text
 - Based on **Contributions** from members
 - **Editor** implements agreed changes into baseline text
- **Mature text is approved/agreed by SG / TSAG / WTSA** (see previous slides)
- **Professional editing of texts performed by the secretariat**



Work item life cycle: maintenance

- **Translation into 6 languages*** for
 - All TAP texts
 - Selected AAP texts
- **Approved / published texts are maintained by revisions, amendments, corrigenda and implementers' guides**
 - No systematic review process; driven by proposals
- **Obsolete Recommendations can be withdrawn or superseded**

* ITU working languages: English, French, Spanish, Chinese, Arabic, Russian



From work item to Recommendation (1)

- **Choose target group**
 - E.g. Study Group, Working Party, Question
- **Identify current work items**
 - ITU-T work programme
(http://itu.int/ITU-T/workprog/wp_search.aspx)
- **Decide whether:**
 - Contribute to existing item
 - Initiate new work item
- **Define participation (who, when, how)**
- **Consultations**
 - Secretariat and chairs



From work item to Recommendation (2)

- **New work: iterative approach**

- High level proposal first (skeleton); details to come after
- Usually, SG members are conservative and tend to resist ready / closed / complete proposals
- Be open to input from others, but be prepared to move it along (do not expect others to do it for you)

- **Existing work: evolutionary approach**

- understand precedents, fit into current environment

- **Physical participation essential during initial and final stages**

- Many important interactions happen in-between sessions: coffee-breaks, lunches, dinners, etc.



From work item to Recommendation (3)

- **Participate in the consensus-building process**
- **WI is mature:** start approval process
 - Normative: AAP, TAP
 - Non-normative: approval
- **Follow up approval process**
- **Assist as need in the publication process**
 - Copyediting by secretariat
- **Post-publication follow-up**
 - Maintenance, revisions, public questions



Online resources

- **Working methods online course** ("A.1")
- **ITU-T Delegates' Resource**
- **ITU-T Study Groups**
- **ITU-T work programme**





Guidelines to submit contributions to ITU-T Study Groups



The importance of contributions

- Contributions provide the vital “fuel” to the work of the Study Groups
- Well-written and well-structured contributions are essential to the success of Study Groups and Working Parties
- Our collaborative work towards global ICT standards depends on the timely submission of relevant, quality contributions by delegates to ITU-T Study Groups



Where to find information on submitting contributions to ITU-T

- General directives on the preparation and submission of contributions are set out in the ITU-T A-series recommendations
- **ITU-T A.1** covers the submission and processing of contributions, i.e. deadlines, posting, patent/licensing declarations
- **ITU-T A.2**, including its **Appendix**, provides guidelines on content, mechanics and formatting

<http://www.itu.int/ITU-T/recommendations/index.aspx>



General Directives on Contributions: Concise and Universal

- Concisely drafted and clearly written, comprehensive, universally understood
- Not using technical jargon peculiar to an author's country
- Using international terminology and units (e.g. ISO/IEC system of units and UTC universal time)
- In one or more of the official and working languages of the Union (alternative submission deadlines apply if translation required)



General Directives on Contributions: Length of contributions

- Length might vary but normally, would not exceed about **2500 words** (no more than 5 printed pages)
- Should be accompanied by an **introduction** that provides information on the desired outcome



General Directives on Contributions: What NOT to be submitted or included

- Documents of purely theoretical interest not directly related to the Questions under study
- Articles published in the technical press (unless they relate directly to Questions under study)
- Passages of an unduly commercial nature



General Directives on Contributions: Content and Structure

- A contribution should start with a **Heading** and an **Introduction** as independent sections
- Main text of contribution should have 2 sections:
 - 1. **Rationale** (or Discussion)
 - 2. **Proposal** (or Conclusion).
- Supplementary sections such as annexes, if required
- Patent and licensing declaration, if relevant

Note: Guidelines for structure of main text do not apply to draft Recommendations or to submission by rapporteurs.



How to submit a contribution

- Via **electronic means**, through DDP (Direct Document Posting)
 - <http://www.itu.int/net/ITU-T/ddp/>
- Using the Contribution template
 - <http://www.itu.int/en/ITU-T/studygroups/Pages/templates.aspx>
- If software to be included, **software copyright statement and licensing declaration** form to be submitted at same time as contribution
(form available on ITU-T website)



When to submit a contribution

- At least **2 months** before the meeting in question if translation is requested
 - Contributions cannot be translated if submitted with less than 2 months notice
- At least **12 calendar days** before the meeting in question if no translation required.
 - In this case the Contribution must be submitted in English
- Contributions received **less than 12 days** before the meeting **will not appear on the agenda** and will be held for the next meeting



**We look forward to receiving your
contributions in the current Study Period
(2017-2020)**

Thank you very much!

Denis ANDREEV
ITU-T Study Group Advisor
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