

ITU-T SG15 Liaison Report

15 July 2024

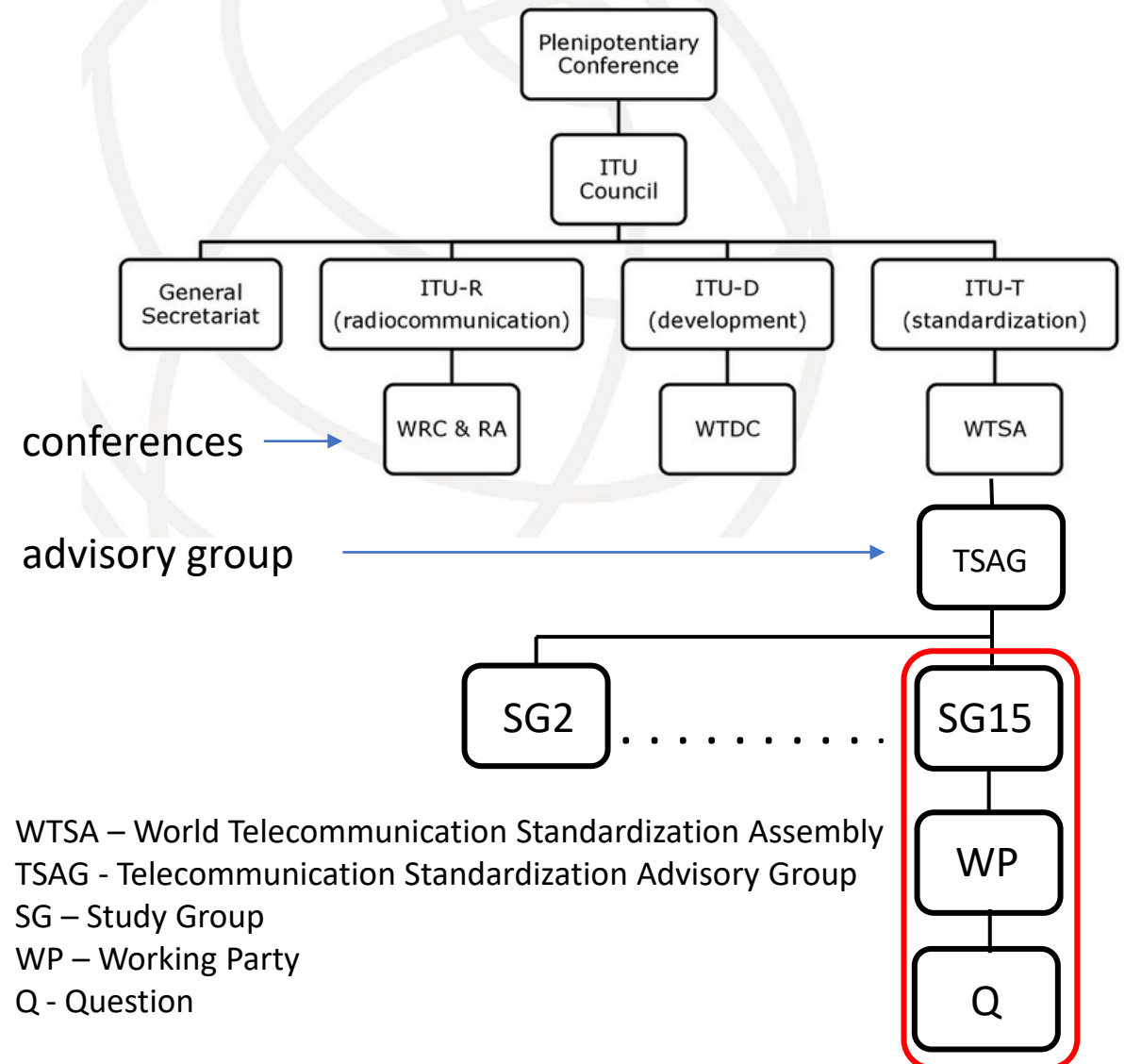
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ITU high level structure

- ITU is an organization of the UN
 - Structure and scope of work for ITU-T study groups as well as SG leadership, is refreshed on a 4-year cycle via WTSA
 - The next WTSA is October 2024
 - Leadership at the WP and Question level is determined by the SG chair
- Documents
 - Normative standards are referred to as Recommendations
 - Informative documents are Supplements or Technical Reports

ITU Structure and organization



ITU-T SG15 structure

	Question	Question title
WP1/15	1/15	Coordination of Access and Home Network Transport Standards
	2/15	Optical systems for fibre access networks
	3/15	Technologies for in-premises networking and related access applications
	4/15	Broadband access over metallic conductors
WP2/15	5/15	Characteristics and test methods of optical fibres and cables, and installation guidance
	6/15	Characteristics of optical components, subsystems and systems for optical transport networks
	7/15	Connectivity, Operation and Maintenance of optical physical infrastructures
	8/15	Characteristics of optical fibre submarine cable systems
WP3/15	10/15	Interfaces, interworking, OAM, protection and equipment specifications for packet-based transport networks
	11/15	Signal structures, interfaces, equipment functions, protection and interworking for optical transport networks
	12/15	Transport network architectures
	13/15	Network synchronization and time distribution performance
	14/15	Management and control of transport systems and equipment

WP: Working Party

Joint ITU-T SG15-IEEE 802 workshop

- The 9th joint ITU-T SG15-IEEE 802 workshop was held 13 July 2024
- 184 people registered
- Discussion was organized in 4 sessions moderated by SG15 and 802 leaders
 - **Exploration of Optical PHYs Addressing 800 Gb/s and Beyond**
John D'Ambrosia (802.3dj task force chair) and Steve Gorshe (Q11/15 rapporteur)
 - **Access and In-Premises Networks**
Frank Effenberger (Q2/15 rapporteur) and George Zimmerman (802.3dg TF chair)
 - **Synchronization and TSN**
Janos Farkas (802.1 TSN task group chair) and Stefano Ruffini (Q13/15 rapporteur)
 - **YANG and Data Modelling**
Scott Mansfield (Q14/15 rapporteur)
 - **Closing/summaries**
Glenn Parsons (SG15 chair) and James Gilb (802.3 chair)

Workshop key takeaways (1)

Examples of successful collaboration

- Extensive collaboration between P802.3dj, P802.3dk, Q2/15, Q5/15, Q6/15 over several months leading to the revision of ITU-T G.652
- Reuse of FEC frames enables pluggable modules to support both Ethernet and ITU interface specifications
 - SG15 expects to continue reusing Ethernet FEC frames and pluggable modules for short-reach interfaces at 800G and 1.6T
 - 800GBASE-ER1 aligns to both OIF 800ZR and ITU FlexO-8e-DO formats
- Component reuse and design synergy for PON and bidirectional PHYs (e.g., one module can meet both 802.3 and SG15 specifications)
- Coordination for YANG model development

Workshop key takeaways (2)

Additional observations

- There are opportunities to improve synergy between the various in-premises networking technologies (WiFi, copper Ethernet, optical Ethernet)
- Fiber manufacturers had been focused primarily on reducing loss and bend sensitivity, and ignoring other characteristics like CD since they were not important at lower signaling rates; the introduction of 200G/lane (and future extension to 400G/lane) requires a different focus
- PTP accuracy is becoming more important for both Ethernet interfaces and transport network interfaces
- Scalability is a key concern for YANG interfaces

Key results from SG15 meeting

- Status of ITU-T SG15 'adoption' of IEEE 802.3
 - The proposal was agreed; approval process expected to start at the next SG15 meeting in March 2025
 - There is also interest in extending this concept to other IEEE 802 documents, e.g., IEEE 802.1Q
 - Q10/15 will be responsible for this work
- Approval process for revised G.652 has started
- Transmit Quality Metrics for 800G under discussion in Q6/15

- Additional details are in liaison statements

Next ITU-T SG15 meetings

- Q6/15, Q11/15, and Q13/15 will meet 18-22 November 2024
- SG15 plenary 17-28 March 2025, Geneva, Switzerland