ITU-T standardization and coordination

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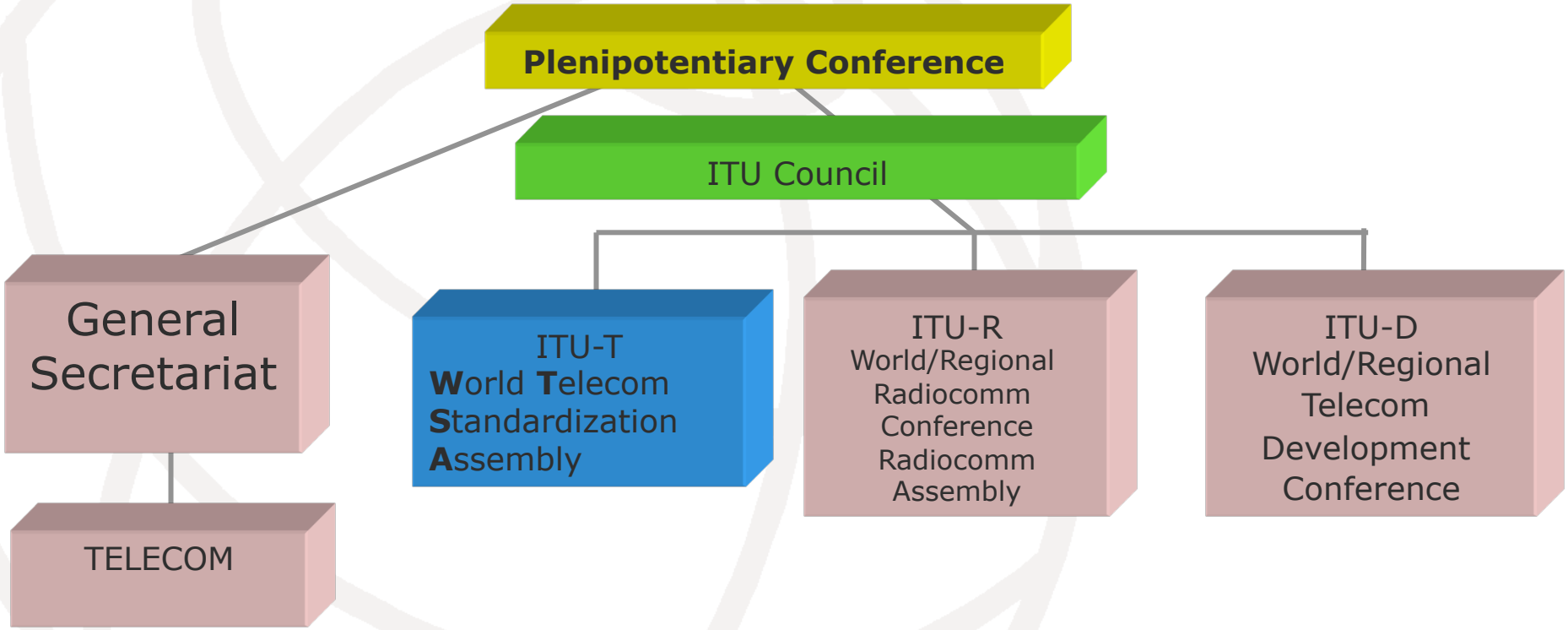
ITU Membership

- Member States: **193 governments**
- Sector Members **625**
  - All study groups in one sector
- Associates **167**
  - one study Group only
- ITU-T Academia **63**
  - All study groups
- http://itu.int/members

ITU Structure

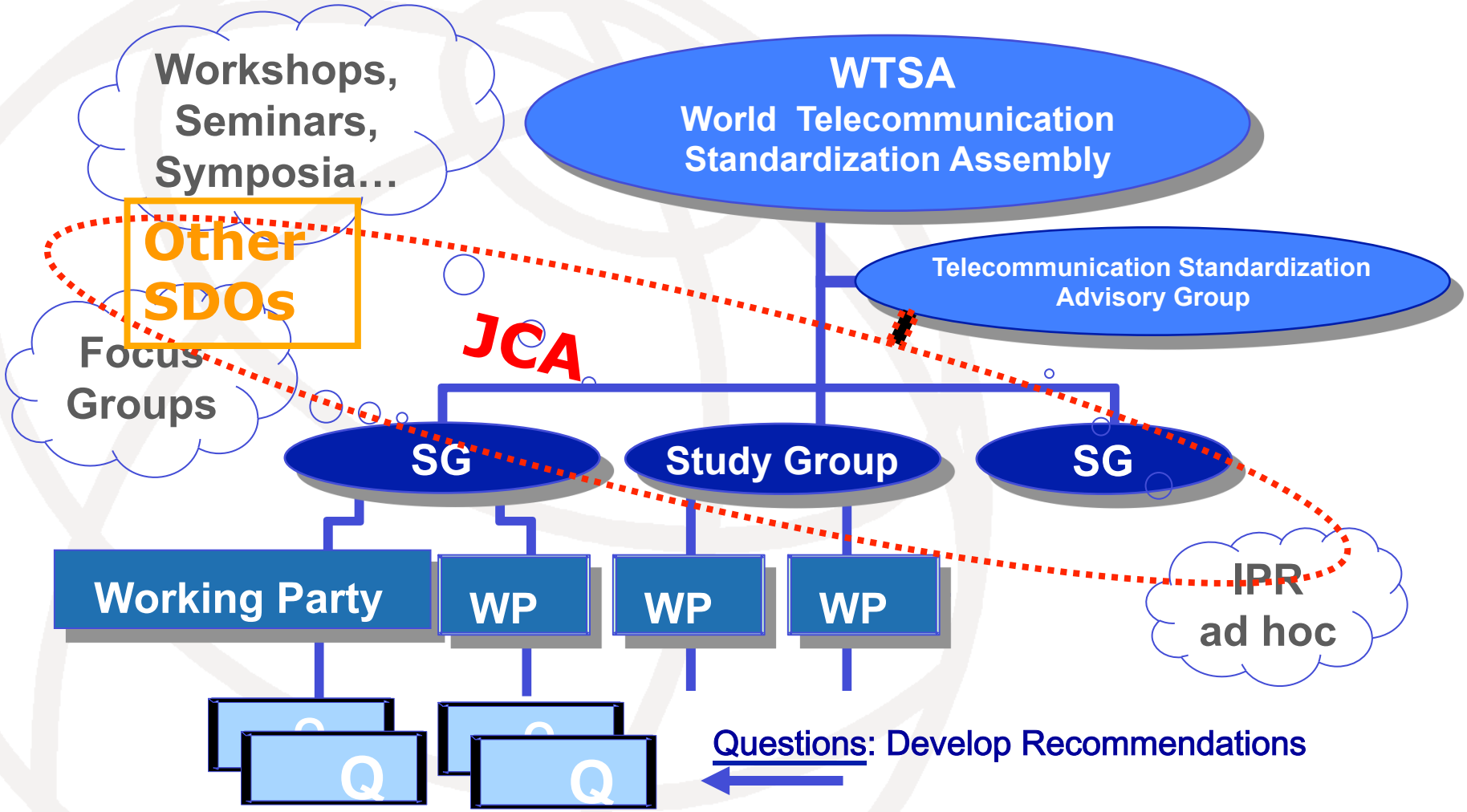
Oldest UN specialized agency (founded in 1865)



ITU-T in a Nutshell

- ITU-T Product: Recommendations (= "standards")
  - Freely available to the public
- Work (mostly) done in Study Groups (10 of them)
- Unique partnership of private sector & government
- Truly global
- Consensus decisions
- Very flexible
- Fast procedures, transparent procedures
- Brand name
- Interoperability events / ITU-T Conformity database
- Common Patent Policy ITU-T/ITU-R/ISO/IEC

ITU-T Working Structure



Work in Study Groups

- SG Face-to-face meeting cycle every 6 – 9 months
  - Paperless meetings (electronic working methods)
  - Encourage remote participation (web-conferencing, email)

- More frequent meetings are:
  - Rapporteur meetings to deal with specific Questions (electronic or face-to-face meetings as frequently as once a month)
  - Working Party meetings

ITU Secretariat Services

- Dedicated "Counsellor" per SG:
  - Provide administrative support with technical knowledge (engineer)
  - Manager for meeting logistics
  - Responsible for quality of the Recommendations (ITU is publishing house)
  - Responsible for website (parts in 6 languages)
  - Technical aspects of SG-related Workshops

Current Study Groups

- SG2 - Operational aspects
- SG3 - Economic and policy issues
- SG5 - Environment and climate change
- SG9 – Broadband cable and TV
- SG11 - Protocols and test specifications
- SG12 - Performance, QoS and QoE
- SG13 – Future Networks
- SG15 – Transport access and home
- SG16 - Multimedia
- SG17 - Security

ITU-T Study Group 15

Development of standards on optical transport network, access network, home network, and power utility network infrastructures, systems, equipment, optical fibres and cables, and their related installation, maintenance, management, test, instrumentation and measurement techniques, and control plane technologies to enable the evolution toward intelligent transport networks, including the support of Smart Grid applications. This encompasses the development of related standards for the customer premises, access, metropolitan and long-haul sections of communication networks as well as for power utility networks and infrastructures from transmission to load.

SG15 Lead study group roles

- access network transport
- optical technology
- optical transport networks
- smart grid

SG15 Working Parties

- WP1/15: Transport aspects of access networks and home networking
- WP2/15: Optical access/transport network technologies and physical infrastructures
- WP3/15: Transport network structures

Q13/15 - Network Synchronization and Time Distribution Performance

Network synchronization performance specifications are essential for successful operation and integration of digital transmission networks and associated switching and signalling systems and mobile networks. Network timing performance studies are needed to determine the feasibility and most effective means of implementing a time reference distribution service.

Work in Focus Groups

- Works on a **well-defined topic**
- Work in a scheduled **time-frame**
- Establishes **its own working methods**
- **Non-ITU Members** can participate

- **Output** → "**ITU-T Specification**"
  (not Recommendations!)
  - However, output of FG can be input to a study group to make it an ITU-T Recommendation

Currently 5 Focus Groups

- Smart Sustainable Cities (SSC)
- Bridging the Gap: from Innovation to Standards (Innovation)
- Disaster Relief Systems, Network Resilience and Recovery (DR&NRR)
- M2M Service Layer (M2M)
- Smart Water Management (SWM)

Joint Coordination Activities

- Currently **10** JCAs (itu.int/ITU-T/jca)
- **Management tool** when subject spans more than one study group
- **For coordination** and planning
  - Technical work done by the study groups
- **External organizations** can join a JCA

Current Joint Coordination Activities

- Software-Defined Networking (JCA-SDN)
- Technical aspects of telecommunication networks to support the Internet (JCA-Res178)
- Child Online Protection (JCA-COP)
- Cloud Computing (JCA-Cloud)
- Internet of Things (JCA-IoT)
- ICT and climate change (JCA-ICT&CC)
- Accessibility and Human factors (JCA-AHF)
- Identity Management (JCA-IdM)
- Joint Coordination Activity on IPTV (JCA-IPTV)
- Conformance and Interoperability Testing (JCA-CIT)

World Standards Cooperation: ISO, IEC, ITU

- Established in 2001
- Joint initiatives: **common text**, **common patent policy**, **joint workshops**, **joint education & training**
- Regular formal and informal contact of ISO, IEC, ITU leadership
- Goal: strengthen and advance the voluntary consensus-based international standards systems of ITU, ISO, and IEC
- Avoid duplication and overlap of work
- ITU-T Leadership meeting with ISO/IEC JTC 1

Collaboration with Major SDOs

- **Global Standards Collaboration**
- MoU between **ITU** and **ETSI; IEEE Com Soc, CERN …**
- MoU on e-business **ISO, IEC, ITU, UN/ECE**
- Some SDOs also **Sector Members** (IEEE,ETSI,IETF …)
- **Joint workshops** (including **Kaleidoscope**)
- Leadership meetings: **ISO/IEC JTC1** & **IETF**
- ITU-T and **ICANN**
  - (Reinhard Scholl, TSB Deputy Director was on ICANN Board)
- ITU-T and **IETF**
  - Collaboration agreement A.sup3 and RFC 3356
- **Global Standards Symposium** (WTSA-12, Nov 2012)
- **CTO Group** high-level, private sector executives meetings

Partnership and External Cooperation

Recommendation ITU-T A.4

- Procedure to approve/establish communication process with Forums/Consortia

Recommendation ITU-T A.5

- Procedure to qualify organizations for including references in ITU-T Recommendations

Recommendation ITU-T A.6

- Procedure to approve cooperation and exchange of information with national and regional standards development organizations

ITU-T and Academia

How academia has participated so far

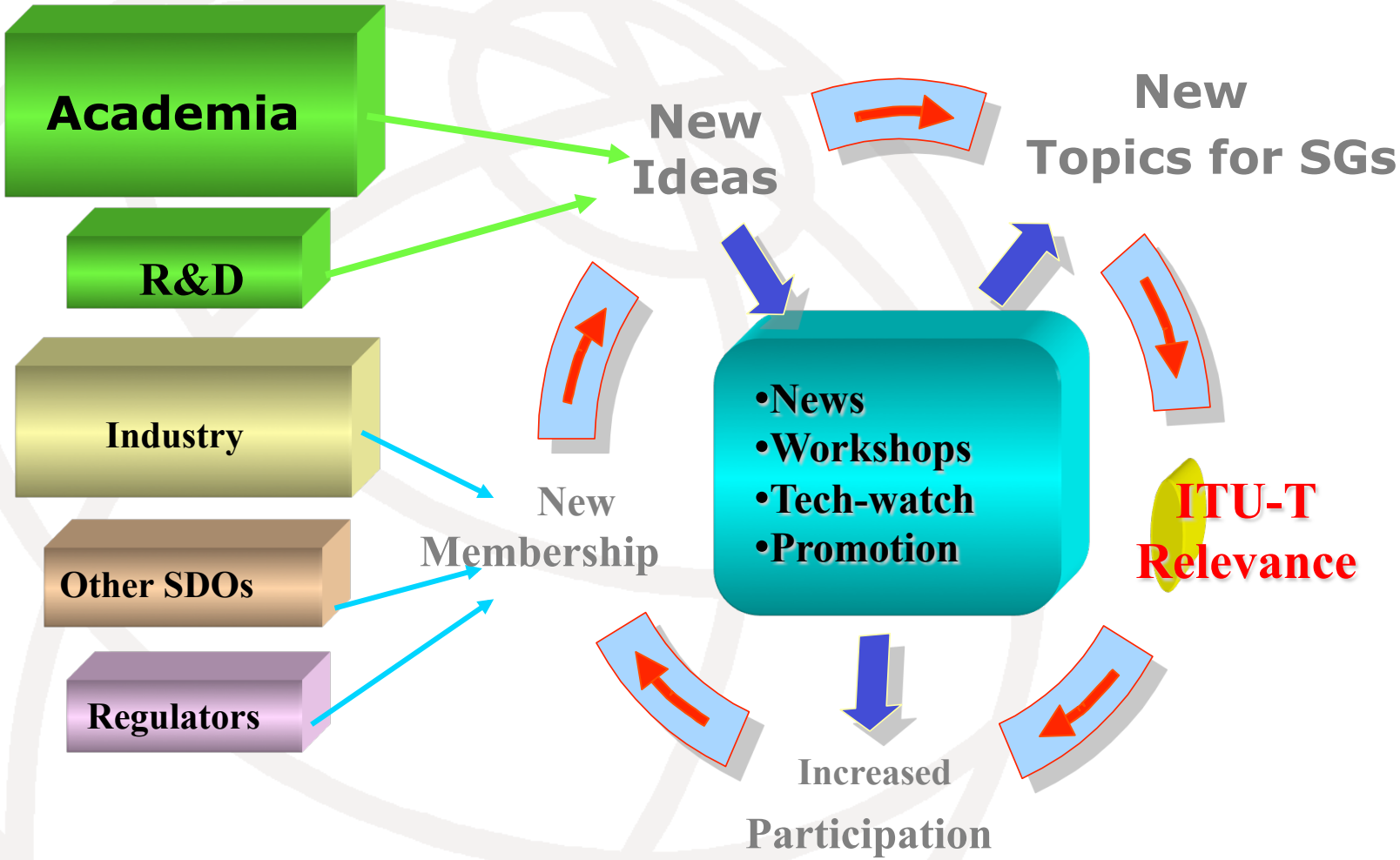
- Discrete participation in SG activities
  - Some individuals from academia have leadership roles in ITU-T (Editors, Rapporteurs, chairs of technical committees)
- Participation in Focus Groups and Technology Watch
- Participation in ITU-T workshops
- Regional activities (e.g. ITU Centres of Excellence)

- Recently introduced membership category for academia: Reduced fee for academia CHF3975 (less for universities in developing countries)
- 38 Academic members have joined ITU-T since the membership category was added in late 2010

Why Involving Academia?

- Increase academic participation in ITU
  - Students of today are the people who will shape the technology world of tomorrow
- Capture new work (innovations in ICT) for the standardization marketplace.
  - Universities and R&D institutions are an important pool of innovation.

Academia & ICT standardization



Kaleidoscope Events

- Series of academic conferences
  - International Organizing Committee (10-20 experts)
  - Call for Papers
  - International Programme Committee (more than 100 Experts)
  - Paper review process → double-blind / peer-review
  - IEEE Com Soc (technical co-sponsor)
  - Proceedings distributed via IEEE Xplore
  - 3 best papers award (10'000 USD) event sponsors

- Bridging academia, research & ITU-T standardization activities for discussion on technological innovation and its socio-economic implications


www.itu.int/ITU-T
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