ITU-T SG15 Session:
ITU-T Standardization: from G-PON to 10G: XG-PON
@
FTTH Council Europe Conference,
Lisbon, Portugal, 24-25 February 2010

ITU-T:
Standards for Optical Communication

Helmut Schink,
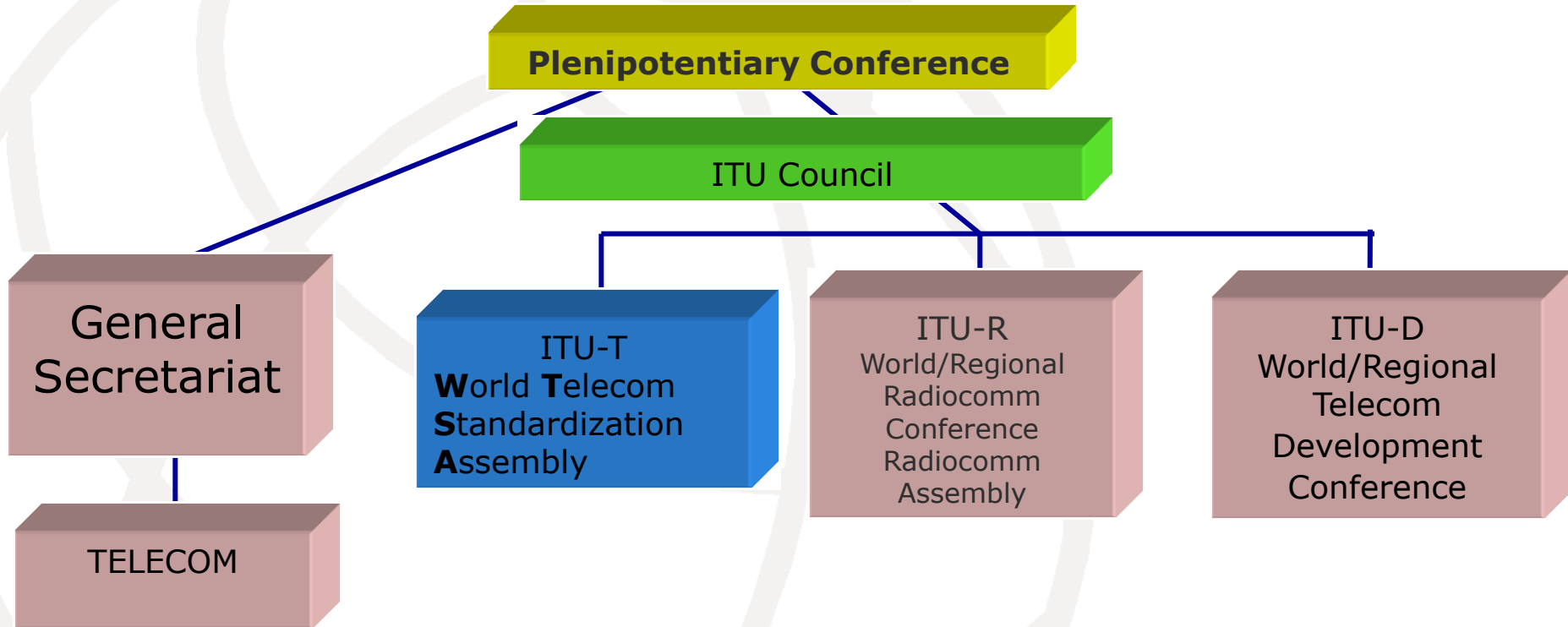## Vice Chair of SG 15
Nokia Siemens Networks

Agenda 09:30- 11:30

- **Helmut Schink**, Head of Standards for Wireline, Multimedia and Service Delivery, Nokia Siemens Networks, and Vice-Chairman, ITU-T SG15
  "ITU-T:Standards for Optical Communication"

- **Yupeng Xiong**, Director of European Access Network Marketing, Huawei, and contributor to SG15
  "Review of G-PON standards and their application"

- **Fabrice Bourgart**, R&D Expert on Optical Access Solutions at Orange Labs in Lannion – France, Co-Editor of ITU-T G.987.1
  "Review of XG-PON standards progress"

- **Francesco Montalti**, Responsible for Outside Plant Engineering in the Open Access division of Telecom Italia, and Vice-Chairman of ITU-T SG15
  "FTTH Optical Infrastructure: Standardization Activities in SG15"

- **Panel discussion**, also including **Greg Jones**, Counsellor, ITU-T Study Group 15

ITU Structure

Plenipotentiary Conference

ITU Council

General Secretariat

TELECOM

ITU-T
World **T**elecom **S**tandardization **A**ssembly

ITU-R
World/Regional Radiocomm Conference Radiocomm Assembly

ITU-D
World/Regional Telecom Development Conference

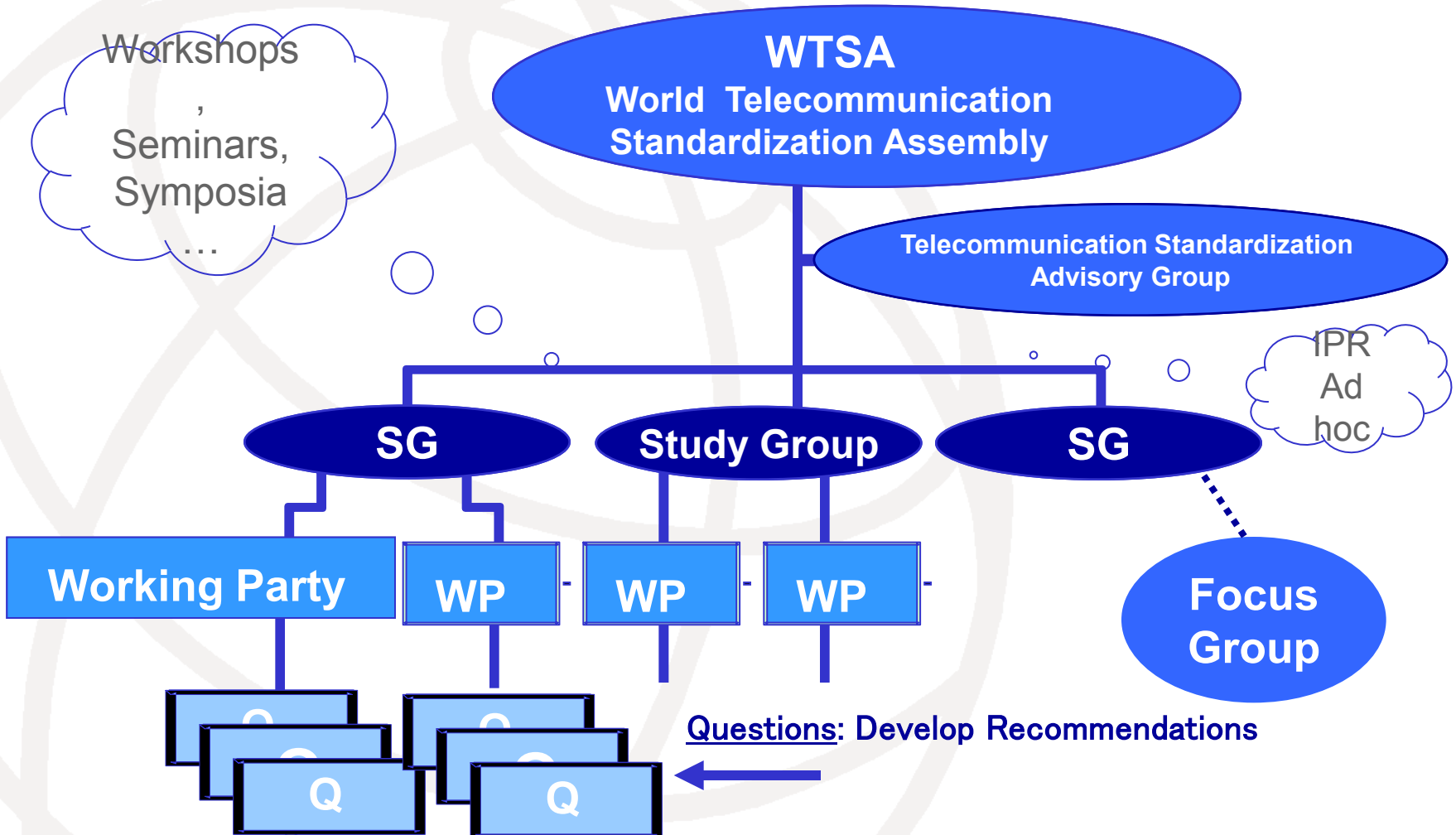Lisbon, Portugal, 24-25 February 2010

ITU Membership

- Member States: 191 governments

- ITU-T, ITU-R, ITU-D Sector Members (565)

  - ITU-T Sector membership fee:

    31,800 CHF (= 20 kEUR)

- Associates (154): have right to participate in one study group

  - Associate membership fee:

    10,600 CHF (= 7 kEUR)

- Today, 95% of the work in ITU-T is done by the private sector (Sector Members and Associates)

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ITU-T in a Nutshell

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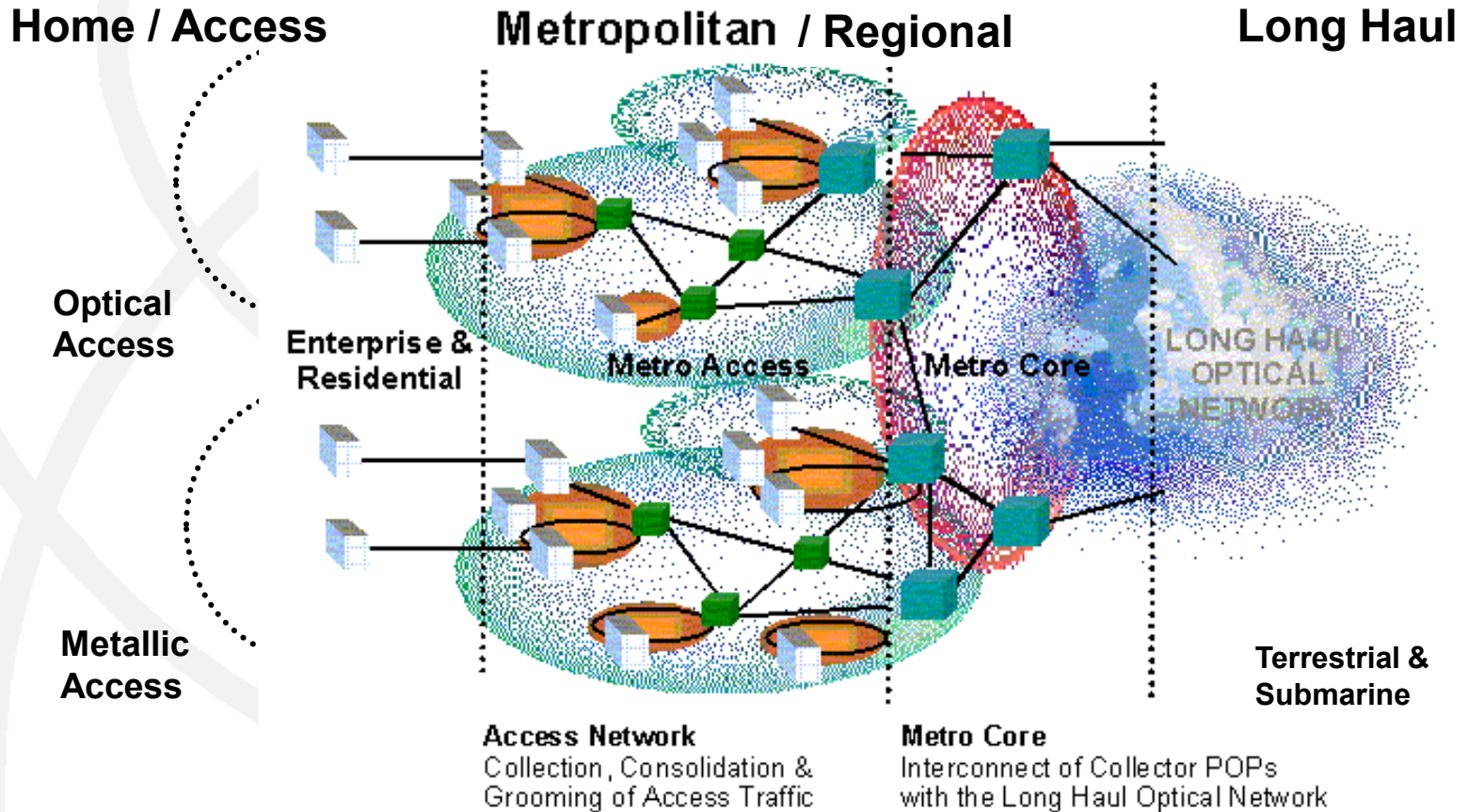- Common Patent Policy ITU-T/ITU-R/ISO/IEC

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ITU-T Structure

Workshops, Seminars, Symposia …

WTSA
World Telecommunication Standardization Assembly

Telecommunication Standardization Advisory Group

IPR Ad hoc

SG

Study Group

SG

Working Party

WP

WP

WP

Focus Group

Q Q Q Q

Questions: Develop Recommendations

Study Group 15: Overview

- General area of study is on "Optical transport networks and access network infrastructures"

- SG 15 is the 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 the evolution toward intelligent transport networks. This encompasses the development of related standards for the customer premises, access, metropolitan and long haul sections of communication networks.

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Study Group 15: Overview

Home / Access

Metropolitan / Regional

Long Haul

Optical Access

Metallic Access

Enterprise & Residential

Metro Access

Metro Core

LONG HAUL OPTICAL NETWORK

Terrestrial & Submarine

Access Network
Collection, Consolidation & Grooming of Access Traffic

Metro Core
Interconnect of Collector POPs with the Long Haul Optical Network

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Projects and Opportunities SG 15

- Major projects
  - Lead SG on access network transport
  - Lead SG on optical technology
  - Lead SG on optical transport networks
- New opportunities
  - Home networking
  - Energy management
  - Power saving
  - Home and commercial building automation transceivers
  - New customer premises cabling
  - Interoperability testing (e.g. with FTTH Council Europe)
  - Packet Transport
  - Device Management

ITU-T WP 1/15
Passive Optical Network access

- **Recommendations Approved**
  - G.983 BPON (622 / 155 Mbps)
  - G.984 GPON (2.4 / 1.2 Gbps)
  - G.985 point-to-point EPON (100 Mbps)
  - G.986 point-to-point EPON (1 Gbps)
  - G.987 XGPON (10 / 2.5 Gbps) – SR and PMD layers
- **Work in progress for June 2010**
  - G.987 XGPON (10 / 2.5 Gbps) – TC layer
  - G.988 Generic OMCI (PON management)
- **Further work**
  - G.987 XGPON2 (10 / 10 Gbps) ?

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ITU-T WP 2/15
Optical access/transport network technologies and physical infrastructures

- ~40 existing recommendations related to FTTH infrastructures produced by SG6 and SG 15

- ~20 recommendations in preparation in this study period

- 10 years of cost effective introduction of FTTx technologies in the access network

- Complete coverage on products, planning, deployment and maintenance

- Also standards for customer premises, access, metropolitan as well as long haul sections of communication networks

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SG 15 Management

- Chair: Yoichi Maeda, NTT
- Vice-Chairs, WP Chairs:
  - Sadegh Abbasi Shahkooh, Iran
  - Baker Baker, Syria
  - Júlio Cesar Fonseca, Brasil
  - Viktor Katok, Ukraine
  - Francesco Montalti, WP 2, Telecom Italia
  - Helmut Schink, Nokia Siemens Networks
  - Tom Starr, WP 1, AT&T
  - Steve Trowbridge, WP 3, Alcatel Lucent
  - Shaohua Yu, China
- Counsellor: Greg Jones

http://www.itu.int/ITU-T/studygroups/com15/index.asp

helmut.schink@nsn.com