Standardization in ITU-T Study Group 15

Networks, Technologies and Infrastructures for Transport, Access and Home

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Study Group 15 (SG15) mandate

SG15 is responsible for the development of standards on:

optical transport network

systems

instrumentation and measurement techniques

access network

equipment

maintenance

management

test

home network and power utility network infrastructures

optical fibres and cables and their related installation

control plane technologies

to enable the evolution toward intelligent transport networks, including the support of smart-grid applications.

SG15 Working Parties (WPs)

- WP1/15: Transport aspects of access, home and smart grid networks
- WP2/15: Optical technologies and physical infrastructures
- WP3/15: Transport network characteristics

WP1 - Broadband Access

G.FAST

Broadband access up to 2 Gbps



Higher Speed 50G-PON, Multi-Wavelength 25G/10G-PON NG-PON2 (40G), XG(S)-PON (10G)

G.mgfast

Next generation
G.fast targeting 5-10 Gbps



Visible Light Communication for home networking

DTA

G.fast dynamic time assignment (DTA) – downstream/upstream bit-rates responsive to customer traffic



G.hn (-1 G) and G.hn2 (-10G) home networking over indoor phone, power, and coax wires



Continue collaboration with



Fibre to the room (FTTR)



Radio over fiber for mobile fronthaul



Powerline communication (PLC)

WP2 – Optical Technologies



Optical Network Infrastructure





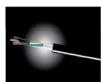




Disaster Management issues







Optical Fibre Technologies and Cables for easy and environmentally friendly outside plants



Multichannel bi-directional DWDM applications targeted at lower cost optical solutions for applications including mobile fronthaul and backhaul



100G and future higher-rate coherent multi-vendor interoperable interfaces

200G 400G



Short-reach (OTN client) 200G and 400G interfaces reusing components developed for Ethernet applications

25 Gbit/s optical interface for mobile optimized transport

WP3 – Optical Transport Networks



Transport and synchronization supporting 5G mobile fronthaul and backhaul



Synchronization of packet networks and future OTN networks, e.g., beyond 100G



G.mtn (metro transport network) for 5G optimized transport



Network survivability (protection and restoration)



Architecture and other Transport SDN Aspects

New "B100G" OTN interfaces,

including the use of coherent G.698.2 interfaces



Management aspects of control and transport planes



Equipment & management specifications for OTN,



Ethernet and MPLS-TP



Core Information model enhancement for management of synchronization and optical media

Meetings

- Past meetings since 2017
 - Geneva, 19 30 June 2017
 - Geneva, 29 January 9 February 2018
 - Geneva, 8-19 October 2018
 - Geneva, 1 12 July 2019
 - Geneva, 27 January 7 February 2020
 - E-meeting, 7-18 September 2020
 - E-meeting, 12-23 April 2021
- Future ITU-T SG15 meeting
 - Format TBD, 6-17 December 2021

Presentations

- Q2 Optical Access Networks Work program review, Frank Effenberger (Futurewei), Rapporteur, Q2/15
- Optical Multi-Vendor Interoperable Specifications in ITU-T SG15/Q6, Fabio Pittalà (Huawei)
- Recent Topics in Optical Transport Networks, *Tom Huber (Nokia), Associate Rapporteur, Q11/15*

