Access Network Transport

Standards Work Plan

April 2023 Q1/15 meeting

Contact persons for the project updating:

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Access Network Transport is an ITU-T Project dealing with studies and Recommendations on the Access Network. The present Access Network Transport (ANT) Standards Work Plan is part of
ITU-T SG15 Lead Study Group activities on coordination of Access Network Transport standards.

Access Network Transport Standards Work Plan

**Issue 36, April 2023**

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| **Revision Status Report: Major Updates of Version 36, April 2023** |
| In this version 36, following changes, additions and updates have been made.1) Section 3.1 - Ongoing standardization activities in the area of Access Network Transportwithin ITU-T SG15The list of ongoing standardization activities in the area of Access Network Transport within ITU-T SG15 has been updated.* The table of Q2/15 and Q4/15 work items has been updated with the latest Q2/15 and Q4/15 activities resulting from April 2023 ITU-T SG15 - WP1 plenary meeting.
* The list of Q5/15 and Q7/15 work items related to the optical physical infrastructures (e.g., fibre and cable, optical node) has been updated with the latest Q5/15 and Q7/15 activities resulting from ITU-T SG15 - WP2 April 2023 plenary meeting.

 2) Section 3.2 - List of ongoing standardization activities in the area of Access Network Transport in other groups within ITU and other Standards Development OrganizationsThe list has been updated with the incoming liaisons from other ITU SGs and SDOs and reports from liaison Rapporteurs of ITU-T SG15.3) New Section 4 – List of Contacts has been updated 4) A new Section 5 – Lead Study Group activities related to the ANT Standards Overview and Work Plan has been updated. |

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ACCESS NETWORK TRANSPORT STANDARDS WORK PLAN

ISSUE 36, APRIL 2023

# General

ANT Standards Work Plan is a living document. The actual version is available at <http://www.itu.int/en/ITU-T/studygroups/com15/Pages/ant.aspx> .

# Introduction

Today's global communications world has obscured traditional boundaries in network access between Telecommunication Network Operators, Communication Services Providers, Satellite and Cable TV Networks, Mobile Networks and Information Technologies. This has resulted in several different Study Groups within the ITU-T, e.g., SG 9, 13, 15 developing Recommendations related to transport in the access. Moreover, ITU-R and other standards bodies, fora and consortia are also active in this area.

Recognizing that without a strong coordination effort there is the danger of duplication of work as well as the development of incompatible and non-interoperable standards, the WTSC 96 designated Study Group 15 as **Lead Study Group** on **Access Network Transport (ANT) - reaffirmed at the WTSA-20 -** with the mandate to:

1. study the appropriate core Questions (Question 1, 2 and 4/15),
2. define and maintain an overall (standards) framework, in collaboration with other SGs and standards bodies
3. coordinate, assign and prioritize the studies done by the Study Groups (recognizing their mandates) to ensure the development of consistent, complete and timely Recommendations.

Study Group 15 entrusted Working Party 1/15 (Transport aspects of access, home and smart grid networks), under Question 1/15, with the task to manage and carry out the Lead Study Group activities on coordination of Access Network Transport standards.

# 1. Scope

As the mandate of this Lead Study Group role implies, the standards area covered relates to transport, i.e., Circuit Layer (CL), Path Layer (PL) and Transmission Media Layer (TM) in terms of the general protocol reference model for the Access Network ITU-T Recommendation G.902, Fig. 2/G.902.
The corresponding transport functions include:

1. multiplexing function
2. cross connect function, including grooming and configuration
3. management functions
4. physical media functions.

The outcome of the Lead Study Group activities is twofold, consisting of an:

* Access Network Transport (ANT) Standards Overview
* Access Network Transport (ANT) Standards Work Plan

The main purpose of **the Standards Overview** is to identify the existing standards related to the Access Network Transport technologies.

The main purpose of **the Standards Work Plan** is to:

* define a corresponding matrix table, including the various standards organizations,
* provide an overview of ongoing ANT activities,
* monitor progress of ANT standards work,
1. facilitate the coordination/negotiation for additional standards work on ANT to be undertaken,
2. identify lack of standards,
3. identify duplication and/or overlap,
4. discover priorities and market needs.

The **Work Plan** reflects the agreement reached between the parties concerned on the necessary actions to remedy the deficiencies identified.

Apart from taking the Lead Study Group role within the ITU-T, Study Group 15 also endeavor to cooperate with ITU-R and other relevant organizations, such as Broadband Forum, ETSI, IEEE , ISO/IEC, etc..

# 2.  General Access Network architecture

**Access Network Transport (ANT)**

Based on definitions specified in ITU-T Rec. G.902 the Access Network (AN) provides transport bearer capabilities for the provision of telecommunications services inside of the AN between a service node interface (SNI) providing customer access to a service node and each of the associated interfaces towards the Customer Premises Network(s) which are being grouped as user network interfaces (UNIs). An Access Network implementation comprises transmission media and access network element (NE) entities.
An Access Network is delimited by its interfaces. Users are connected via a User Network Interface (UNI) to the network. The AN is connected to the Service Node (SN) via the Service Node Interface (SNI) and to the Telecommunication Management Network (TMN) via a Q3 interface.
Figure 1 “General Access Network architecture and boundaries” shows the AN with the UNI, SNI and Q3 interface as the boundaries to other network entities.



Figure 1 “General Access Network architecture and boundaries” (from ITU-T G.902)

An Access Network element can be configured and managed through a Q3interface which may be implemented at the Q reference point. This Q reference point is the access point for management information, configuration control, performance monitoring and maintenance as defined in ITU-T Rec. M.3010.

In principle there are no restrictions on the types and number of SNIs and UNIs which an Access Network may implement. The Access Network does not include Customer Premises Networks and/or terminal equipment respectively.

**Functions of Access Network Transport (ANT)**

The Transport Function (TF) provides the paths for the transport of common bearers between different locations in the Access Network (AN) and the media adaptation for the relevant transmission media used.

Examples of transport functions are:

1. multiplexing function,
2. cross connect function including grooming, on demand connection and configuration,
3. management functions,
4. physical media function.

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## 3. Ongoing standardization activities in the area of Access Network Transport

**3.1 Ongoing standardization activities in the area of Access Network Transport within ITU-T SG15**Question 2 and Question 4 of ITU-T SG15 – WP1/15 are responsible for Access Network Transport standardization activities.
Q2/15 addresses “Optical systems for fibre access networks” and Q4/15 the “Broadband access over metallic conductors”.The table of Q2/15 and Q4/15 work items has been updated with the latest Q2/15 and Q4/15 activities resulting from April 2023 ITU-T SG15 - WP1 plenary meeting

| **Work item** | **Question** | **Status** | **Timing** | **Approval process** | **Subject / Title** | **Base****Text** | **Editor(s)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| [G.988 Amd.1](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18553) | Q2/15 | Under study  | 2023-11 | AAP | ONU management and control interface (OMCI) specification | [[142-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-WP1-0142) | Marta Seda (Calix), Yuanqiu Luo (Futurewei) |
| [G.989.3 Amd.1](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18553) | Q2/15 | Consented | 2023-04 | AAP | 40-Gigabit-capable passive optical networks (NG-PON2): Transmission convergence layer specification Amendment 1 | [[170-PLEN]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-PLEN-0170) | Dezhi (James) Zhang (China Telecom), Denis A. Khotimsky (Verizon) |
| [G.9802](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18254) | Q2/15 | Under study | 2023-11 | AAP | Multiple-wavelength passive optical networks (MW-PONs) | TBD | Yuanqiu Luo (Futurewei Technologies), Dechao Zhang (China Mobile) |
| [G.9802.2 (ex G.WDMPON.pmd&tc)](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18233) | Q2/15 | Consented | 2023-04 | AAP | Wavelength Division Multiplexed Passive Optical Network: Physical media dependent (PMD) and Transmission Convergence (TC) (G.WDMPON.pmd&tc) (Continuation of the G.9802 series) | [[167-PLEN]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-PLEN-0167) | Peter Dawes (Vodafone Group), Derek Nesset (Huawei Technologies) |
| [G.9802.2](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18233) Amd.1 | Q2/15 | Under study | 2023-11 | AAP | Wavelength Division Multiplexed Passive Optical Network: Physical media dependent (PMD) and Transmission Convergence (TC) Amd.1 | [[133-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-WP1-0133) | Peter Dawes (Vodafone Group), Derek Nesset (Huawei Technologies) |
| [G.9804.1 Amd.2](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18279) | Q2/15 | Under study | 2023-11 | AAP | Higher Speed Passive Optical Networks: Requirements - Amendment 2 | [[124-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-WP1-0124) | Dezhi (James) Zhang (China Telecom) |
| G.9804.2 Amd.2 | Q2/15 | Under study | 2024-07 | AAP | Higher Speed Passive Optical Networks: Common Transmission Convergence layer Specification - Amendment 2 | [[126-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-WP1-0126) | Dan Geng, Yuanqiu Luo |
| G.9804.3 Amd 2 | Q2/15 | Under study | 2024-07 | AAP | 50-Gigabit-capable passive optical networks (50G-PON): Physical media dependent (PMD) layer specification Amendment 1 | Tbd | Rene Bonk, Dekun Liu, Dechao Zhang |
| [G.9805 Amd.1](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18586) | Q2/15 | Consented | 2023-04 | AAP | Coexistence of Passive Optical Network Systems -Amendment 1 | [[166-PLEN]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-PLEN-0166) | Dezhi (James) Zhang (China Telecom), Dekun Liu (Huawei Technologies) |
| [G.9806 Amd.3](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18250) | Q2/15 | Consented | 2023-04 | AAP | Higher speed bidirectional, single fibre, point-to-point optical access system - Amendment 3 | [[153-PLEN]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-PLEN-0153) | Fabrice Bourgart (Orange), Jun Shan Wey (Verizon) |
| [G.9806 Amd.](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18250)4 | Q2/15 | Under study | 2023-11 | AAP | Higher speed bidirectional, single fibre, point-to-point optical access system - Amendment 4 | [117-WP1] | Fabrice Bourgart (Orange), Jun Shan Wey (Verizon)  |
| [G.hsp.TWDMpmd](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18206) | Q2/15 | Under study | 2023-11 | AAP | Higher Speed Passive Optical Networks: TWDM PMD | [[58-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-220919-TD-WP1-0058) | Christopher Bernard (Calix Networks, Inc.), Richard Goodson (ADTRAN) |
| [G.sup.eOLT](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18282) | Q2/15 | Under study | 2023-11 | Agreement | Enhanced optical line termination with IT functions | TBD | Wu Jia (China Unicom), Yi Jiang (ZTE), Haomian Zheng (Huawei) |
| [G.sup.PONlatency](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18281) | Q2/15 | Under study | 2023-11 | Agreement | Latency control and deterministic capability over a PON system | [[123-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-WP1-0123) | Dezhi (James) Zhang (China Telecom), Xuming Wu (Huawei Technologies Co., Ltd) |
| [G.suppl.55](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18555) | Q2/15 | Under study | 2023-11 | Agreement | Radio over Fiber Systems | TBD | Toshiaki Kuri (NICT) |
| [G.suppl.VHSP](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18554) | Q2/15 | Under study | 2024-07 | Agreement | PON transmission technologies above 50 Gb/s per wavelength | [[118-WP1]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-230417-TD-WP1-0118) | Dekun Liu (Huawei Technologies), Bhushan Padhiar (AT&T), Jun Shan Wey (Verizon) |
| G.supp.PONsec | Q2/15 | Under study | 2024-07 | Agreement | Practical aspects of PON security | [[429]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-C-0429) | Dezhi (James) Zhang (China Telecom), Denis A. Khotimsky (Verizon), Dekun Liu (Huawei Technologies) |
| G.sup.OANops | Q2/15 | Under study | 2024-07 | Agreement | Operational aspects of optical access | [[587]](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=T22-SG15-C-0587) | Denis A. Khotimsky (Verizon), Fabrice Bourgart (Orange) |
| [G.9701 Cor.4](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18540) | Q4/15 |  Consented | 2023-04 | AAP | Fast access to subscriber terminals (G.fast) - Physical layer specification: Corrigendum 4 | TD118/P | Les Brown (Huawei) |
| [G.9711 Cor. 2](http://www.itu.int/itu-t/workprog/wp_item.aspx?isn=18288) | Q4/15 |  Consented | 2023-04 | AAP | Multi-gigabit fast access to subscriber terminals (MGfast) - Physical layer specification - Corrigendum 2 | TD117/P | Frank Van der Putten (Nokia) |

**Work item**: Short name identifying a (draft or approved) Recommendation or other text. It may be a provisional name or the final publication designation (e.g. H.264)
**Question**: Number of the Question responsible for the development of a work item
**Status**: Current Approval state of a work item
**Timing**: Best current estimate of the expected year and month of Determination (TAP), Consent (AAP), or Agreement (non-normative materials) of a work item
**Approval process**: One of: Traditional Approval Process (TAP); Alternative Approval Process (AAP); or Agreement
**Subject / Title**: Best current expectation of the full name of a work item
**Base text(s)**: Previous published version of a work item and/or its latest draft. It may also include reference to A.5 justification documentation.
**Editor(s)**: Person(s) responsible for coordinating development of a work item

Question 5 and Question 7 of ITU-T SG15 – WP2/15 are responsible for the standardization of components for the optical physical infrastructures (e.g., fibre and cable, optical node).
Q5/15 addresses “Characteristics and test methods of optical fibres and cables, and installation guidance” and Q7/15 the “Connectivity, operation and maintenance of optical physical infrastructures”.

The list of Q5/15 and Q7/15 work items related to the optical physical infrastructures (e.g., fibre and cable, optical node) has been updated with the latest Q5/15 and Q7/15 activities resulting from ITU-T SG15 - WP2 April 2023 plenary meeting.

Q5/15

- Revision of G.650.1: Definitions and test methods for linear, deterministic attributes of single-mode fibre and cable

- Revision of G.657: Characteristics of a bending-loss insensitive single-mode optical fibre and cable

- Amendment 1 of L.100: Optical fibre cables for duct and tunnel application

- Revision of L.109: Construction of optical/metallic hybrid cables

Q7/15:

* Revision of L.250: Optical access network topologies for broadband services
* Revision of L.340: Maintenance of cable tunnels
* Revision of L.312: Optical fibre cable maintenance support, monitoring and testing system for optical fibre cable networks carrying high total optical power
* Revision of L.360: Operations support system requirements for infrastructure and network elements management using ID techonology
* Revision of L.341: Management of poles carrying overhead telecommunication lines
* Questionnaire on optical infrastructure sharing
* New work item under study on pre-connectorized cabling components for FTTx infrastructures
* Revision of LSTP-GSLR - Guide on the use of ITU-T L-series Recommendations related to optical technologies for outside plant

Work Programme of ITU-T SG15 can be found at <https://www.itu.int/ITU-T/workprog/wp_search.aspx?sg=15>

More information about ITU-T SG15 can be found at <https://www.itu.int/en/ITU-T/studygroups/2022-2024/15/Pages/default.aspx>

**3.2 Ongoing standardization activities in the area of Access Network Transport in other groups within ITU and other Standards Development Organizations**

The following list provides information on the Work Plans and ongoing ANT activities of various standardization groups outside ITU-T SG15 . This list is intended to improve understanding of the ongoing work in the different standardization groups and may help identify possible gaps or overlaps.

|  |  |  |  |
| --- | --- | --- | --- |
| Item No. | Source | Subject / Title | Comment |
|  | **ITU-T SG9** *SG15 TD 85 WP1April 2023**SG15 TD 86 WP1April 2023* | **ITU-T SG9: Audiovisual content transmission and integrated broadband cable networks** ITU-T SG9 informs ITU-T SG15 that during its meeting held on 6-14 September 2022, SG9 started the approval process (AAP consent) for the revised Recommendations ITU-T J.224 “*Fifth-generation transmission systems for interactive cable television services - IP cable modems*” and ITU-T J.225 “Fourth-generation transmission systems for interactive cable television services - IP cable modems.” SG9 also agreed to publish the revised Supplement ITU-T J.Sup 10 “*Correspondence between CableLabs DOCSIS Specifications and ITU-T J-series Recommendations*.”ITU-T SG9 informs ITU-T SG15 that during its meeting held on 6-14 September 2022, SG9 initiated two new work items under study: ITU-T J.HiNoC3-PHY “*Physical layer specification for third-generation HiNoC*” and ITU-T J.HiNoC3-MAC “*MAC layer specification for third-generation HiNoC*”.Work Programme of ITU-T SG9 can be found at following URL<https://www.itu.int/ITU-T/workprog/wp_search.aspx?sg=9> | More information about ITU-T SG9 can be found at following URL<https://www.itu.int/en/ITU-T/studygroups/2022-2024/09/Pages/default.aspx> |
|  | **ITU-T SG11***SG15 TD 92 WP1April 2023* | **ITU-T SG11: Signalling requirements, protocols, test specifications and combating counterfeit telecommunication/ICT devices** ITU-T SG11 informs ITU-T SG15 on its plan to update information in the [C&I Reference Table](https://www.itu.int/en/ITU-T/C-I/Pages/CI-reference.aspx) with test specifications developed by A.5 qualified SDO related to conformance testing of ITU-T G.984.1, G.984.2, G.984.3.SG11 was informed that TSB received an application from a test laboratory (TL) recognized by ITU seeking registration of ICT products tested against Recommendations ITU-T G.984.1, G.984.2, G.984.3 using test specifications developed by the China Communications Standards Association (CCSA), which is an A.5-qualified SDO.Question 1 of ITU-SG15 will issue a liaison response to ITU-T SG11 to inform SG11 that SG15 has no concerns and therefore SG11 can register the product in the ITU Product Conformity Database (<https://itu.int/go/tcdb>) accordinglyWork Programme of ITU-T SG11 can be found at following URL<https://www.itu.int/ITU-T/workprog/wp_search.aspx?sg=11> | More information about ITU-T SG11 can be found at following URL<https://www.itu.int/en/ITU-T/studygroups/2022-2024/11/Pages/default.aspx> |
|  | **ITU-T SG16**  | **ITU-T SG16: Multimedia and related digital technologies​** Work Programme of ITU-T SG16 can be found at following URL<https://www.itu.int/ITU-T/workprog/wp_search.aspx?sg=16> | More information about ITU-T SG16 can be found at following URL<https://www.itu.int/en/ITU-T/studygroups/2022-2024/16/Pages/default.aspx> |
|  | **ITU-R SG1** | **ITU-R SG1: Spectrum Management**ITU-R WP1A: Spectrum engineering techniques | More information about ITU-R SG1 can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg1/Pages/default.aspx>More information about ITU-R WP1A can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg1/rwp1a/Pages/default.aspx> |
|  | **ITU-R SG5** | **ITU-R SG5: Terrestrial Services**WP5A: Land mobile service above 30 MHz (excluding IMT); wireless access in the fixed service; amateur and amateur-satellite services- ITU-R WP5A updated the “Guide to the use of ITU-R texts relating to the land mobile service, including wireless access in the fixe service” on 8 March 2023: see at <https://www.itu.int/oth/R0A06000001/en>ITU-R WP5C - Fixed wireless systems; HF and other systems below 30 MHz in the fixed and land mobile servicesITU-R WP5D – IMT Systems | More information about ITU-R SG5 can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg5/Pages/default.aspx>More information about ITU-R WP5A can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5a/Pages/default.aspx>More information about ITU-R WP5C can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5c/Pages/default.aspx>More information about ITU-R WP5D can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/Pages/default.aspx> |
|  | **ITU-R SG6***SG15 TD 12 GEN September 2022* | **ITU-R SG6: Broadcasting Service**ITU-R SG6 informs ITU-T SG15 that it has established a Rapporteur Group - Future of Broadcasting (RG-FOB) at its November 2021 meeting to develop draft new ITU-R texts giving a Vision for the Future of Broadcasting. The RG-FOB members agreed to work on following topics:Section 1 – IntroductionSection 2 – User ExperienceSection 3 – Production ExperienceSection 4 – Delivery ExperienceSection 5 – Accessible ExperienceSection 6 – Sustainable ExperiencePublication of the final text is targeted in Q2 2023.ITU-R WP6A: Terrestrial broadcasting deliveryITU-R WP6B: Broadcast service assembly and access | More information about ITU-R SG6 can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx>More information about ITU-R WP6A can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg6/rwp6a/Pages/default.aspx>More information about ITU-R WP6B can be found at following URL<https://www.itu.int/en/ITU-R/study-groups/rsg6/rwp6b/Pages/default.aspx> |
|  | **ITU-D SG1and ITU-D SG2***SG15 TD 91 WP1April 2023* | **ITU Telecommunication Development Sector (ITU-D)**The ITU-D Sector published a new guide: “Guide for procuring last-mile connectivity data networks” in June 2022 (see at [https://www.itu.int/hub/publication/d-tnd-05-2022/](https://www.itu.int/hub/publication/d-tnd-05-2022)). This guide complements “The Last-mile Internet Connectivity Solutions Guide: Sustainable Connectivity Options for Unconnected Sites” published in January 2020 (see at <https://www.itu.int/pub/D-TND-01-2020>)**ITU-D SG1: Enabling environment for meaningful connectivity**Question 1/1: Strategies and policies for the deployment of broadband in developing countriesQuestion 5/1: Telecommunications/ICTs for rural and remote areasITU-D Q1/1 thanks ITU-T SG15 for the LS on the new versions of the ANT Standards overview and work plan and provides the link [1/REP/1](https://www.itu.int/md/D22-SG01-R-0001/en) to its report of meeting 29 November 2022. The date of next ITU-D Q1/1 meeting is 8-19 May 2023.**ITU-D SG2: Digital transformation**Question 1/2 : Sustainable smart cities and communities | More information on the ITU-D Sector can be found at following URL<https://www.itu.int/en/ITU-D/Pages/default.aspx>More information about ITU-D SG1 and SG2 can be found at following URL<https://www.itu.int/en/ITU-D/Pages/New-ITU-D-Study-Group-Questions.aspx> |
|  | **Broadband Forum***SG15 TD 90 WP1April 2023* | **Broadband Forum** <https://www.broadband-forum.org>Broadband Forum informs ITU-T SG15 that it has currently no feedback to convey concerning the ANT Standards overview and work plan.Broadband Forum refers ITU-T SG15 to its published specification work on the [Broadband Forum website](https://www.broadband-forum.org/technical-reports) and its specification work in progress on the [Broadband Forum Work in Progress Wiki](https://wiki.broadband-forum.org/display/BBF/BBF%2BWork%2Bin%2BProgress%2B-%2BProjects%2C%2BProject%2BStreams%2C%2Band%2BJira%2BLinks) which will provide more detailed information on Broadband Forum work.Published Broadband Forum Technical Reports related to ANT can be found following URL <https://www.broadband-forum.org/technical-reports>Broadband Forum Test Plans related to ANT can be found at following URL <https://www.broadband-forum.org/test-plans> | Broadband Forum Work in Progress related to ANT can be found at following URL <https://www.broadband-forum.org/broadband-forum-resources/work-in-progress> |
|  | **CENELEC TC86A and TC86BXA***SG15 TD 135 GENApril 2023**SG15 TD 136 GENApril 2023* | **CENELEC TC 86A - Optical fibres and optical fibre cables**Business Plan of TC 86A: see<https://standards.cencenelec.eu/BPCLC/BP_TC_86A.pdf>Work progresses from CENELEC TC 86A since September 2022* New work item initiated for *“New blowing route for indoor cables”*
* Documents proposed to IEC SC86A
* EN IEC 60794-1-1xx: “*Generic specification – Basic optical cable test procedures – Determination of the maximum applicable push force during cable installation by blowing”*. IEC SC86A will include it in the programme of work as new project.
* EN IEC 60794-1-124: “*Generic specification – Basic optical cable test procedures – Installation test for microduct cabling”*. IEC SC86A will integrate it in the revision of IEC 60794-1-21.
* Documents planned for revision
* EN 50551-1 *“Simplex and duplex cables for use in terminated cable assemblies - Part 1: Blank Detail Specification and minimum requirements”*

**CENELEC TC86BXA - Fibre optic interconnect, passive and connectorized components**Work progresses from CENELEC TC 86BXA since September 2022- New work items for EN 50411-3-10: “*Free-breathing terminals, category A, for FTTH optical drop cable networks*.”- Document approved for revision: EN 50411-2-10: “*Fibre management system, splice closure, for category C & A*”.* Following documents will be submitted to the national committees for final voting:
* EN 50411-3-1: “*Fibre management system, splice wall box, for category C & A*”.
* EN 50411-3-2: “*Single-mode mechanical fibre splice*”
* Following documents were published:
* EN 50411-3-6: “*Multimode mechanical fibre splice*”
* EN 50411-6-1: “*Unprotected microduct for categories A and S*”.
* Documents listed for withdrawal:
* EN 50411-2: “*General and guidance for optical fibre cable joint closures, protected microduct closures, and microduct connectors*.” (Information is nearly the same as in EN 50411-2-5)
* EN 61758-1: “Interface standard for closures - Part 1: General and guidance” (as this document is already withdrawn in IEC)

Business Plan of TC86BXA: see <https://standards.cencenelec.eu/BPCLC/BP_TC_86BXA.pdf> | More information about CLC/TC 86A can be found at following URL <https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258369>More information about CLC/TC 86BXA can be found at following URL <https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258371> |
|  | **IEC TC 86***SG15 TD 140 GENApril 2023* | **IEC TC 86 - Fibre optics****IEC TC 86 SC 86A - Fibres and cables**Following documents from IEC SC86A WG1 (Fibres) that are relevant to the ANT are in ballot process (or in preparation for ballot) (CD, CDV, or FDIS) since the last ITU-T SG15 September 2022:**-** Revision of IEC 60793-2-50, Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres* Comments received on CD were resolved. Main change is the inclusion of 200-micron outer coating diameter category of B-654 fibres. CDV to be circulated.

Following documents from IEC SC86A WG3 (Cables) that are relevant to the ANT are in ballot (or in preparation for ballot) since the last ITU-T SG15 September 2022 meeting:- IEC 60794-1-1 ED5: Optical fibre cables - Part 1-1: Generic specification – General (FDIS)- IEC TR 63431 ED.1: Optical fibre cables - Microduct technology – Guidance**IEC TC 86 SC 86B Fibre optic interconnecting devices and passive components****IEC TC 86 SC 86C Fibre optic systems and active devices** | More information about IEC TC 86 can be found at following URL<https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1279>More information about IEC TC 86 SC 86A and work programme can be found at following URL <https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1398>More information about IEC TC 86 SC 86B and work programme can be found at following URL <https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1401>More information about IEC TC 86 SC 86C and work programme can be found at following URL<https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1403> |
|  | **ETSI TC ATTM** | **ETSI TC ATTM - Access, Terminals, Transmission and Multiplexing**<https://www.etsi.org/committee/1390-attm>Work Programme of ETSI ATTM can be found at following URL<https://portal.etsi.org/tb.aspx?tbid=689&SubTB=689,693,851,706,694,695#/> | See Terms of Reference (ToR) at<https://portal.etsi.org/TB-SiteMap/ATTM/ATTM-ToR>  |
|  | **ETSI TC BRAN** | **ETSI TC BRAN - Broadband Access Radio Networks**<https://www.etsi.org/committee/1389-bran>Work Programme of ETSI BRAN can be found at following URL<https://portal.etsi.org/tb.aspx?tbid=287&SubTB=287#/> | See Terms of Reference (ToR) at<https://portal.etsi.org/TB-SiteMap/bran/bran-tor> |
|  | **ETSI TC Cable** | **ETSI TC Cable – Integrated Broadband Cable Telecommunications Networks**<https://www.etsi.org/committee/1392-cable>Work Programme of ETSI Cable can be found at following URLhttps://portal.etsi.org/tb.aspx?tbid=786&SubTB=786,791,792,793,794#/ | See Terms of Reference (ToR) at<https://portal.etsi.org/TB-SiteMap/CABLE/CABLE-ToR> |
|  | **ETSI TC EE** | **ETSI TC EE – Environmental Engineering**<https://www.etsi.org/committee/1395-ee>Work Programme of ETSI EE can be found at following URL<https://portal.etsi.org/tb.aspx?tbid=28&SubTB=28,29,30,635,853#/> | See Terms of Reference (ToR) at<https://portal.etsi.org/TB-SiteMap/ee/ee-tor> |
|  | **ETSI ISG F5G***SG15 TD 137 GENApril 2023* | **ETSI ISG - Fifth Generation Fixed Network (F5G)**<https://www.etsi.org/committee/1696-f5g>Extract from Liaison Report from ETSI ISG F5G Liaison Rapporteur of ITU-T SG15 and ETSI ISG F5G Liaison OfficerF5G group published three white papers: 1. F5G Vision: Fibre to everywhere and everything (<https://www.etsi.org/images/files/ETSIWhitePapers/etsi_wp_41_FSG_ed1.pdf>)
2. Global Fibre Deployment Index (<https://www.etsi.org/images/files/ETSIWhitePapers/WP_47_GFDI.pdf>)
3. Fixed 5th Generation Advanced and Beyond

(<https://www.etsi.org/images/files/ETSIWhitePapers/ETSI-WP-50-F5G-Advanced-and-Beyond.pdf>)**Use cases of F5G and F5G Advanced**The use cases as described in ETSI GR F5G 008 document are driving the three dimensions of characteristics (i.e. eFBB, FFC and GRE) of F5G. Depending on the use case, one or more dimensions are particularly important. All dimensions of the F5G system architecture are implemented by the use cases. There are total 32 use cases defined, leveraging the fibre optical network to benefit multiple segments including residential applications, business applications, network internal topics such as network optimizations plus the use of F5G for mobile xHaul, and finally vertical industries oriented use cases. The use cases are shown in Figure 5. ETSI GR F5G 002 initially defined the use case 1-16 while use cases 17-32 are newly added and the previous use cases are updated in ETSI GR F5G 008. ETSI GR F5G 020 currently is initiated and under development, collecting new use cases for F5G Advanced. F5G Advanced is assumed to rely on various ITU-T SG15 technologies of the different Questions. Therefore, the topic how those technologies could be used is of interested to different questions of SG15.To implement the use case in Release 2, F5G expect that the ITU-T SG15 group could help develop new technologies or technology features. For example, to adapt to new fibre infrastructure and in-premises scenarios. In general, the use cases are looked at from an end-to-end perspective and might have aspects for various ITU SG15 questions for consideration, however, a few considerations are given here:* Q3 may consider: 1. define low optical link budget for home networking and small building; 2. specify a high priority channel for signalling in fibre networks; 3. define a mechanism to recognize network signalling and protocols, etc.
* Q11 may consider: 1. specify finer granularity OTN; 2. define OTN container with flexible granularity; 3. Optimize OTN to support mixed traffic of ODUs and OSUs, 4. Support for cloudification and multiple cloud access, etc.
* Q2 may consider: 1. supporting TSN features on PON system; 2. Increase in PON throughput via new technologies such as high-order modulation and wavelength-division multiplexing; 3. Improved DBA to support low-latency upstream transmission with latency below 100 µs.
* Q6 may consider: 1. Digitalization of cabling and fibre monitoring
* Q14 may consider: 1. Optimization of fibre network operation through telemetry, 2. Customer interactions and 3. automation

Work Programme of ETSI F5G can be found at following URL<https://portal.etsi.org/tb.aspx?tbid=885&SubTB=885#/> | See Terms of Reference (ToR) at<https://portal.etsi.org/Portals/0/TBpages/F5G/ISG_F5G_ToR_D-G_APPROVED_20191210.pdf> |
|  | **FSAN***SG15 TD 74 WP1September 2022* | **FSAN - Full Service Access Network**[https://www.fsan.org**/**](https://www.fsan.org/)FSAN Management Committee informs ITU-T SG15 that FSAN has been re-chartered as a voluntary consensus standards body. FSAN is a world-wide industry association of operator companies who are interested in and committed to the advancement of optical access networks, technologies and services. FSAN sees its mission in coordinating the development of voluntary consensus standards in the field of optical access networks with the purpose to improve the technology and distribution of broadband optical access services and products for the benefit of the industry as a whole, its customers and consumers. | See FSAN Association 2022 Charter published on 8 August 2022 at<https://www.fsan.org/the-2022-fsan-charter-is-published/> |
|  | **IEEE 802.3***SG15 TD 139 GENApril 2023**SG15 TD 151 WP1April 2023*continuation of**IEEE 802.3** | **IEEE 802.3 Ethernet Working Group**<http://www.ieee802.org/3/>The current revision is IEEE Std 802.3-2022, Standard for Ethernet: <https://standards.ieee.org/ieee/802.3/10422/>Since last IEEE 802.3 Working Group liaison communication, there were several changes in the status of access-related projects within the IEEE 802.3 Working Group:**New document published (since last SG15 September 2022 meeting)**IEEE Std. 802.3cs-2022, Physical Layers and management parameters for increased-reach point-to-multipoint Ethernet optical subscriber access (Super-PON), has been approved on 21 September 2022 and published on 18 November 2022IEEE 802.3 Working Group communicates following update:Since last liaison from IEEE 802.3 Working Group, there were several changes in the status of access-related projects within the IEEE 802.3:**Update on IEEE P802.3cx Task Force**The IEEE P802.3cx Task Force has completed its technical work on the development of optional enhancements to Ethernet support for time synchronization protocols to provide improved timestamp accuracy in support of ITU-T Recommendation G.8273.2 'Class C' and 'Class D' system time error performance requirements with the recent approval of the amendment IEEE Std 802.3cx-2023 Standard for Ethernet Amendment 6: Media Access Control (MAC) Service Interface and Management Parameters to Support ImprovedPrecision Time Protocol (PTP) Timestamping Accuracy. This amendment to IEEE Std 802.3-2022 is currently on track to be published in 2023.**Update on IEEE P802.3dk Task Force**The IEEE P802.3dk Task Force started its technical work on the development of higher speed bidirectional fiber access links exceeding the capacity supported by the IEEE Std 802.3cp. There is no technical draft available at this time.Two new projects were approved, targeting updates to Structure of Management Information version 2 (SMIv2) MIB module specifications for IEEE Std 802.3 Ethernet and associated managed object branch and leaf assignments used in the variable descriptors in IEEE Std 802.3 Variable Request operations, administration, and maintenance protocol data unit (OAMPDU) under the project IEEE P802.3.1; and updates to YANG data models for IEEE Std 802.3 Ethernet under the project IEEE P802.3.2. | More information about the IEEE Std. 802.3cs-2022 can be found at the following URL: <https://standards.ieee.org/ieee/802.3cs/7449/>More information about the IEEE P802.3cx Task Force, including the PAR, CSD, and Objectives, can be found at the following URL: <https://www.ieee802.org/3/cx/index.html>More information about the IEEE P802.3dk Task Force, including the PAR, CSD, and Objectives, can be found at the following URL: <https://www.ieee802.org/3/dk/index.html> |

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|  | **IEEE 802.11** | **IEEE 802.11 Working Group for Wireless Local Area Networks**<http://www.ieee802.org/11/>**Wireless LAN / Wi-Fi HotspotIEEE P802.11be** is a new task group to work on a major amendment for next generation wireless LAN to Enable Extremely High Throughput (EHT) and Low Latency for Wi-Fi. The new amendment will define Extreme High Throughput (EHT) physical (PHY) and medium access control (MAC) layers capable of supporting a maximum throughput of at least 30 Gbps.IEEE P802.11be - Standard for Information technology--Telecommunications and information exchange between systems Local and metropolitan area networks--Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Extremely High Throughput (EHT)Branded as future Wi-Fi 7 by the Wi-Fi Alliance | More information about IEEE P802.11be can be found at following URLs<https://standards.ieee.org/ieee/802.11be/7516/><https://beyondstandards.ieee.org/ieee-p802-11be-to-enable-extremely-high-throughput-eht-and-low-latency-for-wi-fi/><https://www.ieee802.org/11/Reports/tgbe_update.htm> |
|  | **IEEE 802.16** | **IEEE 802.16 Working Group on Broadband Wireless Access Standards**<http://www.ieee802.org/16/>Note: The IEEE 802.16 Working Group on Broadband Wireless Access Standards is currently in an inactive state of hibernation. |  |
|  | **IEEE 1904** | **IEEE 1904 Access Networks Working Group**<http://www.ieee1904.org>IEEE 1904 WG is responsible for the maintenance of:- IEEE Std 1904.1-2017 - IEEE Standard for Service Interoperability in Ethernet Passive Optical Networks (SIEPON)- IEEE Std 1904.1-Conformance01-2014 “Standard for Conformance Test Procedures for Service Interoperability in Ethernet Passive Optical Networks, IEEE Std 1904.1(TM) Package A” - IEEE Std 1904.1-Conformance02-2014 - Standard for Conformance Test Procedures for Service Interoperability in Ethernet Passive Optical Networks, IEEE Std 1904.1(TM) Package B- IEEE Std 1904.1-Conformance03-2014 - Standard for Conformance Test Procedures for Service Interoperability in Ethernet Passive Optical Networks, IEEE Std 1904.1(TM) Package C- IEEE Std 1904.2-2021 - IEEE Standard for Control and Management of Virtual Links in Ethernet-based Subscriber Access NetworksThe Working Group is currently developing:- [IEEE P1904.4 Standard for Service Interoperability in 25 Gb/s and 50 Gb/s Ethernet Passive Optical Networks (SIEPON.4)](https://www.ieee1904.org/4/index.shtml) | More information about IEEE 1904.1 can be found at following URL<https://standards.ieee.org/standard/1904_1-2017.html>More information about IEEE 1904.2 can be found at following URL<https://standards.ieee.org/standard/1904_2-2021.html>More information about IEEE P1904.4 can be found at following URL<https://standards.ieee.org/project/1904_4.html> |
|  | **IEEE PLCSCIEEE 1901** | **IEEE Power Line Communications Standards Committee**<https://sagroups.ieee.org/plcsc/>**IEEE 1901 Working Group on Power Line Communications** <https://sagroups.ieee.org/1901/>The scope of the IEEE 1901 Working Group is to maintain and advance the IEEE 1901 standard “IEEE Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications” originally approved in 2010.This has resulted in the publication of IEEE 1901-2020 - IEEE Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications.Most recent activities of the Working Group include the work on the P1901b project “Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications Amendment 2: Enhancements for Authentication and Authorization”. The Draft Standard has been approved by SA ballot on 2 October 2021 and the Standard published on 18 February 2022.1901b-2021 - IEEE Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications Amendment 2: Enhancements for Authentication and AuthorizationIn May 2022, IEEE 1901 Working Group started a new P1901c project: Amendment to IEEE Standard 1901-2020: Enhanced Flexible Channel Wavelet (FCW) physical and media access control layers for use on any media. | More information about IEEE 1901 can be found at following URL<https://standards.ieee.org/standard/1901-2020.html>More information about the draft IEEE 1901.b can be found at following URL<https://standards.ieee.org/ieee/1901b/10362/>More information about P1901c can be found at following URL<https://sagroups.ieee.org/1901/> |
|  | **MoCA***SG15 TD 82 WP1 September 2022* | **MoCA Link™ 2.5, 5G and Satellite Broadband** MoCA Link™ 2.5 MAC/PHY specification, provides a multi-gigabit solution especially designed for sub-millisecond low-latency point to point links over coaxial cabling for fiber extension, satellite, and 5 G connectivity. | More information about MoCA Link 2,5 can be found at following URL<https://mocalliance.org/mocalink/moca-link-5G-and-satellite-broadband.php> |

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## 4. List of Contacts

| **Body**  | **Contact person** | **Link to the Web-Site** | **Status of contact****NotesLiaison Tracking** |
| --- | --- | --- | --- |
| ATIS Committee STEP |  | <https://www.atis.org/committees-forums/> |  |
| Broadband Forum | Lincoln LavoieBroadband Forum Technical Committee Chairlylavoie@iol.unh.edu | [www.broadband-forum.org/](http://www.broadband-forum.org/) | SG15 TD 90 WP1April 2023Liaison RapporteurFrank Van der Puttenfrank.van\_der\_putten@nokia.com |
| CENELECEUROPEAN COMMITTEE FOR ELECTROTECHNICAL STANDARDIZATION |  | [www.cenelec.eu/](http://www.cenelec.eu/) |  |
| CENELEC CLC/TC215, "Electrotechnical aspects of telecommunication equipment” |  | <https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258297> |  |
| CENELEC TC 86A“Optical fibres and optical fibre cables”CENELEC TC 86BXA“Fibre optic interconnect, passive and connectorised components” |  | <https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258369><https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258371> | SG15 TD 135 GENApril 2023Liaison RapporteurDaniel Daems daniel.daems@commscope.comSG15 TD 136 GENApril 2023 Liaison RapporteurDaniel Daemsdaniel.daems@commscope.com |
| ETSI ETSI= European Telecommunications Standards Institute |  | [www.etsi.org](http://www.etsi.org) |  |
| ETSI TC ATTM (Access Terminals, Transmission and Multiplexing)ATTM has the following Working Groups **AT2**: (Infrastructure, Physical Networks & Communication Systems)**TM4**: (Fixed Radio Systems)**TM6** (Wireline Access Network Systems)TG IC CG: (Co-ordination Group Cenelec-ETSI Installations & Cabling) | Chairman: ATTMDominique RocheeG4Udominique.roche@eg4u.orgATTM Technical SecretaryPat O’Keeffe eG4U Pat.okeeffe@eg4u.ie | <https://www.etsi.org/committee/1390-attm>[portal.etsi.org/home.aspx](http://portal.etsi.org/home.aspx)  | SG15 TD 466 WP1Jan – Feb 2020 |
| ATTM AT2 | Chairman : Olivier Bouffant Orange2 avenue Pierre MarzinLannionFranceolivier.bouffant@orange.com  | [portal.etsi.org/home.aspx](http://portal.etsi.org/home.aspx) | SG15 TD 579 WP1April 2021 |
| ATTM TM4 | ChairmanDr. Roberto MacchiSIAE Microelettronica SpAVia MichelangeloBuonarroti 21I-20093Cologno MonzeseItalyRoberto.Macchi@SIAEMIC.it Vice Chairman & SecretaryDr. Nader ZeinNEC Europe Ltd.Athene, Odyssey Business ParkWest End RoadHA46QE South Ru–slip - UKnader.zein@emea.nec.com | [portal.etsi.org/home.aspx](http://portal.etsi.org/home.aspx) |  |
| ATTM TM6 | ChairmanPat O’KeeffeeG4U Pat.okeeffe@eg4u.ie | [portal.etsi.org/home.aspx](http://portal.etsi.org/home.aspx) | SG15 TD 466 WP1Jan – Feb 2020 |
| ETSI TC CABLEIntegrated Broadband Cable Telecommunication Networks |  | <https://www.etsi.org/committee/1392-cable> |  |
| ETSI TC EEEnvironmental Engineering |  | <https://www.etsi.org/committee/1395-ee> |  |
| ETSI BRANBroadband Radio Access Networks |  | <https://www.etsi.org/committee/1389-bran> |  |
| ETSI ISG F5G5th Generation Fixed Network |  | <https://www.etsi.org/committee/1696-f5g> | SG15 TD 137 GENApril 2023Liaison RapporteurTony ZengHuaweiChinatony.zengyan@huawei.com |
| IETFInternet Engineering Task Force |  | <https://www.ietf.org/> |  |
| FSAN=Full Service Access Network | Denis A. KhotimskyChair, FSANdenis.khotimsky@verizon.comDeZhi (James) ZhangVice Chair, FSANzhangdzh@chinatelecom.cn | <https://www.fsan.org/> | Contact made through those attending SG15/Q2 meetings. |
| IECIEC = International Electro-technical Commission |  | [www.iec.ch](http://www.iec.ch) |  |
| IEC TC 86 SC 86AFibres and cables |  | <https://www.iec.ch/dyn/www/f?p=103:7:0::::FSP_ORG_ID:1398> | SG15 TD 140 GEN April 2023Liaison RapporteurSudipta BhaumikSterlite Technologies Ltd, Indiasudipta.bhaumik@stl.tech |
| IEC TC 86 SC 86BFibre optic interconnecting devices and passive components |  | <https://www.iec.ch/dyn/www/f?p=103:7:0::::FSP_ORG_ID:1401> | SG15 TD 158 GENApril 2023Makoto MurakamiLiaison RapporteurNTTmurakami.makoto@lab.ntt.co.jp |
| IEC TC 86 SC 86CFibre optic systems and active devices |  | <https://www.iec.ch/dyn/www/f?p=103:7:0::::FSP_ORG_ID:1403> | Peter PondilloLiaison RapporteurCorning Incorporated pondillopl@corning.com |
| IEEE 802IEEE=Institute of Electrical and Electronics EngineersLAN/MAN Standards Committee |  | [www.ieee802.org/](http://www.ieee802.org/) | [Joint IEEE 802 and ITU-T Study Group 15 Workshop](https://www.itu.int/en/ITU-T/Workshops-and-Seminars/202001/Pages/default.aspx)Geneva, 25 January 2020 |
| IEEE 802.3Ethernet Working Group | David LawChair IEEE 802.3 Ethernet Working Groupdlaw@hpe.com | [www.ieee802.org/3/](http://www.ieee802.org/3/) | SG15 TD 150 WP1April 2023SG15 TD 139 GENApril 2023Liaison RapporteurTom HuberNokia USAtom.huber@nokia.com |
| IEEE 802.11Working Group for WLAN Standards |  | [www.ieee802.org/11/](http://www.ieee802.org/11/) |  |
| IEEE 802.16Working Group on Broadband Wireless Access |  | [www.ieee802.org/16/](http://www.ieee802.org/16/) |   |
| IEEE 1901Working Group on Power Line Communications (COM/PLC) | Chair, Jean-Philippe Faure jean-philippe.faure@progilon.com  | <https://sagroups.ieee.org/1901/> | SG15 TD 639 WP1April 2021 |
| IEEE 1904Access Networks Working GroupIEEE 1904.1Working GroupStandard for Service Interoperability in Ethernet Passive Optical Networks (SIEPON) |  | <http://www.ieee1904.org/>[www.ieee1904.org/1/](http://www.ieee1904.org/1/) |  |
| SCTE Society of Cable Telecommunications Engineers |  | <https://www.scte.org/> |  |
| ITU=International Telecommunication Union |  | [www.itu.int/en/Pages/default.aspx](http://www.itu.int/en/Pages/default.aspx) |  |
| ITU-RITU Radiocommunication Sector |  | [www.itu.int/en/ITU-R/Pages/default.aspx](http://www.itu.int/en/ITU-R/Pages/default.aspx) |  |
| ITU-R WP1A | Philippe AubineauCounsellor, ITU-R SG1philippe.aubineau@itu.intJohn ShawChairman, Correspondence Group on EMC- Related Interference and Coexistence of wired telecommunication systems with radiocommunication systemsshawzone@gmail.com | [www.itu.int/en/ITU-R/study-groups/Pages/default.aspx](http://www.itu.int/en/ITU-R/study-groups/Pages/default.aspx) | SG15 TD 554 WP1April 2021 |
| ITU-R WP4B |  | <https://www.itu.int/en/ITU-R/study-groups/rsg4/rwp4b/Pages/default.aspx> |  |
| ITU-R WP5A |  | <https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5a/Pages/default.aspx> |  |
| ITU-R WP5C |  | [www.itu.int/en/ITU-R/study-groups/rsg5/rwp5c/Pages/default.aspx](http://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5c/Pages/default.aspx) |  |
| ITU-R WP5D |  | [www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/Pages/default.aspx](http://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5d/Pages/default.aspx) |  |
| ITU-R SG6 | Yukihiro NishidaChairman ITU-R Study Group 6nishida.y-fe@nhk.or.jp | <https://www.itu.int/en/ITU-R/study-groups/rsg6/Pages/default.aspx> | SG15 TD 12 GEN September 2022 |
| ITU-R WP6A | John ShawRapporteur on Power Line Telecommunication (PLT) and general EMC-related potentialshawzone@gmail.com | <https://www.itu.int/en/ITU-R/study-groups/rsg6/rwp6a/Pages/default.aspx> | SG15 TD 547 WP1April 2021 |
| ITU-R WP6B | Paul GardinerChairman, WP6Bpaul.gardiner@eu.sony.com | <https://www.itu.int/en/ITU-R/study-groups/rsg6/rwp6b/Pages/default.aspx> |  |
| ITU-TITU Telecommunication Standardization Sector |  | <https://www.itu.int/en/ITU-T/Pages/default.aspx> |  |
| ITU-T SG5 |   | <https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx> |  |
| ITU-T SG9  | Satoshi MiyajiChairman SG9KDDI Corporation, Japansa-miyaji@kddi.comKei Kawamura Rapporteur for Q1/9KDDI Corporationki-kawamura@kddi.comJingyi XueRapporteur of Q10/9ABP, NRTAChinaxuejingyi@abp2003.cnTaeKyoon KimRapporteur for Q7/9ETRIBroadcasting and Telecommunications Convergence Research Lab. Broadcasting System Research Dept./Digital CATV System Research Team138 Gajeongno, Yuseong-gu, Daejeon305-700Korea (Rep. of)tkkim@etri.re.kr | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/09/Pages/default.aspx> | SG15 TD 85 WP1April 2023SG15 TD 86 WP1April 2023  |
| ITU-T SG11 | Ritu Ranjan MittarChairman SG11rr.mittar@gov.in | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/11/Pages/default.aspx> | SG15 TD 92 WP1April 2023 |
| ITU-T SG12  |  | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/12/Pages/default.aspx> |  |
| ITU-T SG13 |  | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/13/Pages/default.aspx> |  |
| ITU-T SG16 | Sarra RebhiOffice National de la télédiffusionTunisiarebhi.sarra@telediffusion.net.tn | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/16/Pages/default.aspx> |  |
| ITU-T SG17 |   | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/17/Pages/default.aspx> |  |
| ITU-T SG20 |  | <http://www.itu.int/en/ITU-T/studygroups/2017-2020/20/Pages/default.aspx> |  |
| ITU-DTelecommunication Development Sector |  | <https://www.itu.int/en/ITU-D/Pages/default.aspx> |  |
| ITU-D SG1  | Ahmed GadRapporteur for Question 1/1, Egyptahmed.abdelaziz.gad@gmail.comAminata AmadouBDT Focal Point for Question 1/1aminata.amadou-garba@itu.int | <https://www.itu.int/en/ITU-D/Pages/New-ITU-D-Study-Group-Questions.aspx> | SG15 TD 91 WP1April 2023 |
| ITU-D SG2 |  | <https://www.itu.int/en/ITU-D/Pages/New-ITU-D-Study-Group-Questions.aspx> |  |
| SCTE SCTE=Society of Cable Telecommunications Engineers |  | <https://www.scte.org/> |  |

# 5. Lead Study Group activities related to the ANT Standards Overview and Work Plan

This list of Lead Study Group activities should be used to identify work items, to show the current status and should be taken as a permanent living document that will accompany the work through the Study Period.

**Status: April 2023**

| **Work Item** | **Title** | **Meeting results** | **Work during interim period** |
| --- | --- | --- | --- |
| 1 | Maintain and update the ANT Standards Overview and ANT Standards Work Plan together with other ITU-T Study Groups and in conjunction with ITU-R and other relevant standards organizations. | The new web-based ANT Standards Overview replaces the lists of ANT Relevant Standards in the Annex 2 of the previous versions of the ANT Standards Overview document. This web-based presentation of the ANT Standards, as well as the ANT Standards Work Plan have been both updated based on received liaison statements (LS) from other ITU-T and ITU-R Study Groups, other SDOs, new approved documents and work plan from ITU-T SG15 WP1 Q2 & Q4, WP2 Q5 & Q7, LS from ITU-T SG15 liaison Rapporteurs and new published documents observed on the web-sites of other relevant SDOs. The ANT Standards Overview document has been entirely redesigned to incorporate the web-based ANT Standards Overview features. These changes have been incorporated in the new version 38 of the ANT Standards Overview and new version 36 of the ANT Standards Work Plan from April 2023. | Maintain existing correspondence relationships with appropriate groups |
| 2 | Maintain and update the web-based ANT Standards Overview. | The new web-based ANT Standards Overview has been entirely redesigned and updated: see at [https://www.itu.int/itu-t/landscape/?topic=tx356&group=g&search\_text=](https://www.itu.int/itu-t/landscape?topic=tx356&group=g&search_text=) |  |
| 3 | Identify “gaps, overlaps and conflicts” by observing ongoing standardization activities. | ITU-T SG15 Q1/15 noted the activities of ETSI new group on 5th Generation Fixed Network (F5G) activities “*shifting the paradigm from Fibre to the Home to Fibre to Everything Everywhere*”. | To follow up ETSI F5G activities with Q2/15 and Q3/15. |
| 4 | Communicate with other groups, inside and outside ITU-T as needed for coordination purposes and serve as focal point to provide ITU inter-Sector coordination with other ITU-R and ITU-D Study Groups. | The new version of the ANT Standards Overview and ANT Work Plan have been provided via LS for action to ITU-T TSAG, ITU-T SG9, SG12, SG13, SG16, SG17, ITU-R SG1, SG5, SG6, ETSI TC ATTM, IEEE 802.3, Broadband Forum, and via LS for information ITU-T SG20 as well as ITU-D SG1. | Maintain existing correspondence relationships with the appropriate groups. |
| 5 | Maintain and update a living list of the conformance and interoperability testing (CIT) activities in other organizations related to technologies based on ITU-T Recs. from WP1/15. | Updated list (SG15-TD113/WP1): Version 16 of living list of CIT activities related to technologies based on ITU-T Recommendations from WP1/15) has been provided via LS for information to ITU-T SG11. | Maintain existing correspondence relationships with the appropriate groups |

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