

Question 1/15 – Coordination of access and home network transport standards

(Continuation of Question 1/15)

1 Motivation

Within the ITU-T, transport technology in the Access Network is under study in a number of different study groups, e.g., SGs 9, 12, 13, and 15, with several Recommendations published, others in development, and other supportive activities conducted, such as workshops. Moreover, ITU-R, IEEE and other standards bodies, forums 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 latest WTSA assigned Study Group 15 as Lead Study Group on access network transport within ITU-T.

An access network transport (ANT) standards overview and an ANT standards work plan have been published.

The ANT standards overview describes various access network transport "scenarios" currently being developed and implemented and a list of associated Recommendations and Standards relating to defining those scenarios.

The ANT standards work plan lists a number of standardization bodies active in the ANT area with names and addresses for contact, communication and collaboration. It also lists possible "gaps", "overlaps" and conflicts of ongoing standardization activities. Both are published on the ITU-T Study Group 15 website.

As home networks become more sophisticated, and as their interactions with the access network become more complex, coordination between access network standards and home network standards becomes of increasing importance.

Using a process similar to the ANT standards coordination, a home network transport (HNT) standards overview and work plan have been published and is available on the SG15 webpage.

The access network is experiencing rapid technical change, historically high subscriber growth rates, a proliferation of new products and solutions, wide entry from new service providers and equipment suppliers who might be unfamiliar with general standards, and governments eager for deployment of advanced technologies in the access network. Access network standardization will see increased numbers of stakeholders who might be not industry experts or even members. These same concerns apply to home networks as they are increasingly connected to the access network and the WAN. The need for coordinated standardization in these portions of the network has not been greater than it is today.

2 Question

- How can ITU-T Study Group 15 best fulfil its mission as Lead Study Group on access network transport within ITU-T?
- How can ITU-T Study Group 15 ensure smooth coordination for home network interactions with the access network?
- Study items to be considered include but are not limited to:
 - Maintain and update the ANT standards overview together with other study groups and in conjunction with ITU-R and other relevant organizations.
 - Maintain and update the ANT standards work plan, report ANT related standards activities underway by recognized standards developing organizations (SDOs), identify "gaps, overlaps and conflicts" by observing on-going standardization activities.

- Maintain and update the HNT standards overview and work plan together with other study groups and in conjunction with ITU-R and other relevant organizations. Report HNT related standards activities underway by recognized SDOs, identify "gaps, overlaps and conflicts" by observing on-going standardization activities. Maintain coordination across the relevant ITU-T study groups to ensure all available expertise is utilized to best advantage and in the establishment of priorities.
- Maintain and update the ANT and HNT standards web presentations.
- Serve as focal point to and provide coordination with other standards organizations, forums and consortia to ensure that the consolidation of work plans and priorities is based on a wide range of business, market and technological inputs.
- Contribute to ITU efforts to support developing countries by making pertinent information available such as ANT and HNT standards, documents and relevant information including indications of best practices on implementation of broadband.
- Contribute to ITU ANT and HNT standardization efforts that communicate, collaborate or otherwise work across industry and technical boundaries for technical standards of mutual benefit.
- Investigation of applications and higher-level discussion in focus groups and joint coordination activities in ITU-T for extraction of new requirements on transport technology in the access and home network.

3 Tasks

Tasks include, but are not limited to:

- Update the ANT standards overview.
- Update the ANT standards work plan.
- Update the HNT standards overview and work plan.
- Maintain the living list of the conformance and interoperability testing (CIT) activities in other organizations related to technologies based on ITU-T Recommendations from WP1/15.
- Update the ANT and HNT web presentations corresponding to the revisions of the ANT and HNT standardization overviews and work plans in order to maintain easy access to the actual information.
- Respond to specific requests for information on ANT and HNT standards from other standards organizations and other interested entities.
- Contribute to the success of pertinent ITU-T activities.
- Communicate with other groups, inside and outside ITU-T as needed for coordination purposes.

As this Question is primarily for coordination, it does not normally develop Recommendations.

An up-to-date status of work under this Question is contained in the SG15 work programme (https://www.itu.int/ITU-T/workprog/wp_search.aspx?sp=17&q=1/15).

4 Relationships

Recommendations:

- None.

Questions:

- Q2/15, Q3/15, Q4/15, Q5/15, Q7/15

Study Groups:

- ITU-T SG5 – Environment and circular economy
- ITU-T SG9 – Broadband cable and TV
- ITU-T SG11 – Signalling requirements, protocols, test specifications and combating counterfeit products
- ITU-T SG12 – Performance, QoS and QoE
- ITU-T SG13 – Future networks, with focus on IMT-2020, cloud computing and trusted network infrastructures
- ITU-T SG16 – Multimedia coding, systems and applications
- ITU-T SG17 – Security
- ITU-T SG20 – Internet of things (IoT) and smart cities and communities
- ITU-R SGs 1, 4, 5 and 6 on Co-existence between wired telecommunication systems and radiocommunication services
- ITU-R WP1A – Spectrum engineering techniques
- ITU-R SG4 on Satellites in access network transport
- ITU-R WP 4B – Systems, air interfaces, performance and availability objectives for FSS, BSS and MSS, including IP-based applications and satellite news gathering
- ITU-R WP 5A – Land mobile service above 30 MHz (excluding IMT); wireless access in the fixed service; amateur and amateur-satellite services
- ITU-R WP 5C – Fixed wireless systems; HF and other systems below 30 MHz in the fixed and land mobile services
- ITU-R WP 5D – IMT Systems
- ITU-R WP6A – Terrestrial broadcasting delivery
- ITU-R WP6B – Broadcast service assembly and access
- ITU-D SG 1 and SG 2 on Broadband access technologies for developing countries
- Other ITU-T committees, e.g., joint coordination activity (JCA) when required.

Other bodies:

- Broadband Forum
- ATIS Committee STEP
- CENELEC CLC/TC205 on Home and Building Electronic Systems
- IEEE 802.3, 802.11 and 802.16
- IEEE 1904
- IEEE Power Line Communications Standards Committee
- CENELEC CLC/TC215 on Electro-technical aspects of telecommunications equipment
- IETF on access network management
- IEC TC86 and its sub-committees on fibre optics
- ETSI TC ATTM, TC CABLE, TC DECT, TC EE and ISG F5G
- ISO/IEC JTC1/SC25 on Interconnection of Information Technology Equipment
- TIA TR-41, TR-42
- HomeGrid Forum
- MoCA Multimedia over Coax Alliance