Joint IEEE 802 and ITU-T Study Group 15 workshop “Building Tomorrow’s Networks”
Geneva, Switzerland, 27 January 2018

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This workshop focused on topics including optical interfaces, passive optical network (PON), mobile fronthaul, 5G mobile transport, management and YANG modeling.

The workshop featured presentations by numerous experts from the IEEE 802.1 and 802.3 working groups and ITU-T Study Group 15. The workshop programme and links to the presentations can be found here.

The workshop took place concurrent with meetings of the IEEE 802.1 and 802.3 working groups the week of 22-26 January, and the meeting of ITU-T Study Group 15 from 29 January to 9 February 2018 in Geneva.
# Takeaways and Conclusions

1. IEEE 802.3 and ITU-T SG15 should avoid duplication of work and try to minimize any divergence of their specifications.

2. The specification methodology being developed for coherent 100G interfaces in G.698.2 provides a good starting point for 100G and above Ethernet interfaces if they are intended for type 5 optical links (see session presentation page 17).

# Suggestions

- Q6/15 should consider including Ethernet rates in its optical signal class definitions to facilitate re-use of specifications.

- IEEE 802.3 B10k SG should weigh the implications of moving away from a comprehensive “plug-and-play” specification to one where the detail of how to engineer the “black link” to meet the transfer specifications is not provided by the standard.
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<th>Takeaways and Conclusions</th>
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<td>1. Regarding optical access networks, 802.3 and Q2/15 have closely related work items.</td>
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<td>2. Many of these projects share a common architecture and design elements, and this similarity is growing.</td>
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<td>Q2/15 and 802.3 should work to converge the specifications of future PON systems.</td>
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<td>802.3 and Q2/15 should work to collaborate on a project to specify higher speed bidirectional access optics.</td>
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Takeaways and Conclusions

1. IEEE 802.1 TSN is applicable to 5G transport, e.g., 802.1CM TSN for Fronthaul

2. ITU-T Q13/15 is enhancing Synchronous Ethernet and the Telecom Profiles of the Precision Time Protocol to address 5G requirements

Suggestions

- ITU-T SG 15 should continue to collect 5G/IMT2020 requirements
- ITU-T Q13/15 in cooperation with 3GPP and CPRI should continue to collect synchronization requirements for 5G
- Applicability of SG15 technologies to 5G transport should be considered
- Applicability of TSN to 5G applications beyond fronthaul should be studied
Takeaways and Conclusions

1. YANG has multiple touch points
2. ITU-T and IEEE Coordination on YANG is key to successful management ecosystem
3. There are distinct areas related to YANG modeling of Ethernet that require tight coordination

Suggestions

- Continue information exchange between ITU-T Q14/15, IEEE 802.1, and IEEE 802.3
- Leverage UML as a mechanism for communication of models
- ITU-T should leverage the IEEE 802.1 and 802.3 YANG work when building YANG for ITU-T specific aspects of Ethernet-based Transport Equipment