

## IEEE 802.3 Ethernet Working Group Liaison Communication

Source: IEEE 802.3 Working Group<sup>1</sup>

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Subject: IEEE 802.3 response to Liaison on HNT standardization work plan

Approval: Agreed to at IEEE 802.3 interim meeting, Spokane, WA, USA, 13<sup>th</sup> September 2018

Dear Mr Trowbridge and members of ITU-T Study Group 15,

Thank you for your liaison statement from February 2018 concerning the Home Network Transport (HNT) Standardization Work Plan.

The following provides an update on the current status of HNT related documents and work within the IEEE 802.3 working group.

The latest IEEE Std 802.3 revision was approved by the Standards Board on 14<sup>th</sup> June 2018 and IEEE Std 802.3-2018 has been published. This 2018 revision incorporates and supersedes the eleven in-force amendments and corrigendum (i.e., IEEE Std 802.3bw-2015, IEEE Std 802.3bp-2016, IEEE Std 802.3bq-2016, IEEE Std 802.3br-2016, IEEE Std 802.3by-2016, IEEE Std 802.3bz-2016, IEEE Std 802.3bn-2016, IEEE Std 802.3bu-2016, IEEE Std 802.3bv-2017, IEEE Std 802.3bs-2017, IEEE Std 802.3cc-2017, and IEEE Std 802.3-2015-Cor1-2017) as well as the previous revision IEEE Std 802.3-2015. Please replace any specific references to IEEE Std 802.3 or any of these amendments or corrigenda in the HNT

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<sup>1</sup> This document solely represents the views of the IEEE 802.3 Working Group, and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

Standardization Work Plan and in any ITU-T Recommendations with a reference to IEEE Std 802.3-2018.

While much of the current work within the IEEE 802.3 Working Group may not be applicable to HNT, for a general overview, the following Task Forces, Study Groups, and ad hoc groups are currently active developing amendments to IEEE Std 802.3-2018:

- The IEEE P802.3bt Power via MDI over 4-Pair Task Force has completed the sponsor ballot process and the draft was approved by the Standards Board on 27<sup>th</sup> September 2018.
- The IEEE P802.3ca 25 Gb/s, 50 Gb/s, and 100 Gb/s Passive Optical Networks Task Force is in the Task Force review phase. The IEEE 802.3 working group has agreed to modification of the objectives to remove 100 Gb/s from the scope of the project, and corresponding PAR modifications are pending approval by the Standards Board.
- The IEEE P802.3cb 2.5 Gb/s and 5 Gb/s Backplane Task Force has completed the Sponsor ballot process and the draft was approved by the Standards Board on 27<sup>th</sup> September 2018.
- The IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet Task Force is in the Sponsor ballot phase, and is seeking conditional approval to proceed to RevCom for approval after the sponsor ballot process is complete.
- The IEEE P802.3cg 10 Mb/s Single Pair Ethernet Task Force is in the Working Group ballot phase.
- The IEEE P802.3ch Multi-Gig Automotive PHY Task Force is in the proposal selection phase.
- The IEEE P802.3.2 (IEEE 802.3cf) YANG Data Model Definitions Task Force has just initiated the Sponsor ballot phase.
- The IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force is in the proposal selection phase.
- The IEEE P802.3cm 400 Gb/s over Multimode Fiber Task Force has begun the Task Force Review phase.
- The IEEE P802.3cn Beyond 10km Optical PHYs Task Force is in the proposal selection phase.

There are two active Study Groups, which are study activities that have not yet reached the stage of an approved Project Authorization Request (PAR), Criteria for Standardization Development (CDS), or project objectives.

- The Bidirectional 10 Gb/s, 25 Gb/s, and 50 Gb/s Optical Access PHYs Study Group is studying proposed new PHY types at the indicated rates of operation using signaling in both directions over a single fiber.
- The Physical Layers for increased-reach Ethernet optical subscriber access Study Group is studying possible new access architectures to support larger reach and split ratios of current PON systems using a combination of WDM and power splitters, while using only passive components between the CO and the subscriber.

We would also like to recommend the following updates to the HNT standards overview document:

- Update all references to “802.3-2015” and “802.3 – 2015” to read “802.3-2018”, given the approval of the 2018 edition of IEEE Std 802.3 in June 2018 (see <http://www.ieee802.org/3/cj/index.html> for details). Attached for your consideration is

a possible replacement of the current Section 6 Work Plan text that may be helpful in referencing the new revision.

- The only other recommended update would be to the page 2 revision history.

We wish to thank the leadership and members of ITU-T SG15 for the opportunity to coordinate references to our work programs and we look forward to such continuing cooperation with ITU-T SG15 in the future.

Sincerely,

David J. Law  
Chair, IEEE 802.3 Ethernet Working Group

## POSSIBLE UPDATE TO HNT WORK PLAN SECTION 6 TABLE

IEEE Std 802.3-2018, *Standard for Ethernet*, is the current revision.

IEEE Std 802.3-2018 currently has two approved amendments. There also are in process, additional proposed amendments to the standard.

The following are example HNT applicable technologies in IEEE Std 802.3-2018 (including its amendments):

- The 10BASE-T, 100BASE-TX and 1000BASE-T specifications for operation over various grades of twisted pair cabling have long been used as a home networking technology, and they continue to be applicable.
- Home gateways typically include both IEEE Std 802.11 specified capabilities and either 10/100 Mb/s or 10/100/1000 Mb/s Ethernet ports.
- 2.5GBASE-T, 5GBASE-T and 10GBASE-T provide a migration path for higher bandwidth home networks.
- 1000BASE-RHA is a plastic optical fiber port type targeted for home networks.
- Fiber optic Ethernet port types would be applicable to HNT especially in cases where a non-conductive medium is required. It is appropriate to note that BASE-T port types are not specified for outdoor cable installations.
- For access to the home, the approved standard includes various speeds of operation for Ethernet Passive Optical Networks.
- The standard also includes DTE Power via the MDI (more popularly called Power over Ethernet) capabilities applicable to HNT (e.g., to provide power to security equipment). These specifications include multiple options for BASE-T cabling with options for amount of power provided to the Powered Device.

Other optional Ethernet capabilities have relevance to HNT including: Time Sensitive Networking related functions appropriate to support applications running over HNT, and Energy-Efficient Ethernet specifications for many port types to reduce energy consumption.

IEEE Std 802.3.1-2013 specifies SNMP management modules for various Ethernet port types and capabilities. (This standard has not been updated to include recent additions included in IEEE Std 802.3-2018).

IEEE P802.3.2 (IEEE 802.3cf) YANG Data Model(s) is a project working on a draft standard for YANG data models for selected Ethernet port types.