

IEEE 802.3 Ethernet Working Group Liaison Communication

Source: IEEE 802.3 Working Group¹

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Subject: Liaison reply to ITU-T SG15: HNT Standardization Work Plan

Approval: Agreed to at IEEE 802.3 interim meeting, Salt Lake City, UT, USA, 23rd May 2019

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

Thank you for your liaison statement from October 2018 concerning the 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.

As noted in our previous update, the current IEEE Std 802.3 revision is IEEE Std 802.3-2018. This revision has three approved amendments, IEEE Std 802.3cb-2018, IEEE Std 802.3bt-2018, and IEEE Std 802.3cd-2018. The list of current activities that may update the base standard are available on the IEEE 802.3 home web page (<http://www.ieee802.org/3/>)

Much of the current work within the IEEE 802.3 Working Group may not be applicable to HNT, but a few recent and current activities we would highlight as possibly related follow.

- IEEE Std 802.3.2-2018 is a new standard that defines YANG management modules for selected types of Ethernet.

¹ 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.

- The approved IEEE Std 802.3bt-2018 Power via MDI over 4-Pair defines a method for provision of more electrical current than supported in earlier Power over Ethernet specifications.
- The IEEE P802.3cq Power over Ethernet over 2 Pairs (Maintenance #13) Task Force is updating IEEE Std 802.3 to implement editorial and technical corrections, refinements, and clarifications to Clause 33, Power over Ethernet over 2 pairs, and related portions of the standard.
- The IEEE P802.3cr Isolation (Maintenance #14) Task Force will replace references to the IEC 60950 series of standards (including IEC 60950-1 "Information technology equipment - Safety - Part 1: General requirements") with appropriate references to the IEC 62368 "Audio/video, information and communication technology equipment" series and make appropriate changes to the standard corresponding to the new references.
- The IEEE P802.3cg 10 Mb/s Single Pair Ethernet Task Force is in the IEEE Standards Association ballot (formerly called Sponsor ballot) phase. Though primarily targeted to Industrial applications, it may find uses in home networking.

Recommended revisions to the current work plan document Section 6 / IEEE / IEEE 802.3 include:

1. The current first paragraph of the 802.3 section has all of the detail in the components used to update IEEE Std 802.3-2015 to IEEE Std 802.3-2018. If this is felt to be helpful to users of the document, add description of the three approved amendments to the standard, perhaps the earlier sentence of this letter: "This revision has three approved amendments, IEEE Std 802.3cb-2018, IEEE Std 802.3bt-2018, and IEEE Std 802.3cd-2018." Alternately replace that paragraph with "IEEE Std 802.3-2018, *Standard for Ethernet*, is the current revision. This revision has three approved amendments, IEEE Std 802.3cb-2018, IEEE Std 802.3bt-2018, and IEEE Std 802.3cd-2018."

2. It appears that the header from our previous possible edits was copied and pasted into the document. This should be removed.

3. A markup (underscore for additions and strikethrough for deletions) of the current text follows using the second alternative of #1 for your consideration:

~~POSSIBLE UPDATE TO HNT WORK PLAN SECTION 6 TABLE~~

IEEE Std 802.3-2018, *Standard for Ethernet*, is the current revision. This revision has three approved amendments, IEEE Std 802.3cb-2018, IEEE Std 802.3bt-2018, and IEEE Std 802.3cd-2018.

~~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~~ also 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 P Std 802.3.2-2018 (~~IEEE 802.3cf~~) YANG Data Model(s) is a ~~project working on a draft~~ new standard for YANG data models for selected Ethernet port types.

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,
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Chair, IEEE 802.3 Ethernet Working Group