IEEE 802.3 Ethernet Working Group
Liaison Communication

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Subject:	IEEE 802.3 update on HNT standardization work plan	
Approval:	Agreed at IEEE 802.3 plenary meeting, Honolulu, HI, USA 16 November 2023	

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

Thank you for your continued interest in the work of IEEE 802.3 Ethernet Working Group 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 Ethernet Working Group (HNT Standards Overview and Work Plan, Section 6/IEEE/IEEE802.3):

IEEE Std 802.3-2022, *Standard for Ethernet* is the current revision. This revision has eight approved amendments: IEEE Std 802.3dd-2022, IEEE Std 802.3cs-2022, IEEE Std 802.3db-2022, IEEE Std 802.3ck-2022, IEEE Std 802.3de-2022, IEEE Std 802.3cx-2023, IEEE Std 802.3cz-2023, and IEEE Std 802.3cy-2023.

The following are example HNT applicable technologies in IEEE Std 802.3-2022 (including its amendments):

[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 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 (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 also providing options for an 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. The IEEE Std 802.3cx-2023, amendment 6, *Improved PTP Timestamping Accuracy* amendment is now published. This amendment improves the precision of delay and jitter measurements, for data carried over Ethernet, capabilities that are leveraged by some time sensitive HNT applications.
- Two additional standards provide SNMP and YANG management capabilities for Ethernet. Projects have been initiated to revise (update) the current standards. These projects are IEEE P802.3.1 (IEEE 802.3.1b), *Standard for Ethernet Structure of Management Information version 2 (SMIv2) Data Model Definitions*, and IEEE P802.3.2 (IEEE 802.3.2a), *Standard for Ethernet - YANG Data Model Definitions*. Both projects started the IEEE 802.3 Working Group ballot out of the November 2023 plenary meeting. More information about these two projects can be found at the following URLs: https://www.ieee802.org/3/1/b and https://www.ieee802.org/3/2/a.

The current IEEE P802.3da project within the IEEE 802.3 Working Group includes in its scope improving time synchronization and power delivery with potential application in home networks. (Current activities are listed on the 802.3 home page: http://ieee802.org/3). Approved amendments to IEEE Std 802.3-2022 and current projects enhance capabilities for many other Ethernet application areas.

The contact information for the chair of IEEE 802.3 in Section 7 is current.

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