IEEE 802.3 Ethernet Working Group
Liaison Communication

Source:	IEEE 802.3 Working Group[1]	
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	Dekun Liu	Associate Rapporteur, Q1/15
	Hiroshi Ota	Advisor, ITU-T SG15
CC:	Konstantinos Karachalios	Secretary, IEEE-SA Standards Board Secretary, IEEE-SA Board of Governors
	Paul Nikolich	Chair, IEEE 802 LMSC
	Adam Healey	Vice-chair, IEEE 802.3 Ethernet Working Group
	Jon Lewis	Secretary, IEEE 802.3 Ethernet Working Group
From:	David Law	Chair, IEEE 802.3 Ethernet Working Group
Subject:	IEEE 802.3 response to Liaison on HNT standardization work plan	
Approval:	Agreed at IEEE 802.3 plenary meeting, Atlanta, GA, USA, 16 March 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 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 (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 seven 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, and IEEE Std 802.3cz-2023 (the last two expected to be published in 2023).

The following are example HNT applicable technologies in IEEE Std 802.3-2022 (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

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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 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 *Improved PTP Timestamping Accuracy* approved draft is expected to be published in 2023. 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, *Standard for Ethernet Structure of Management Information version 2 (SMIv2) Data Model Definitions*, and IEEE P802.3.2, *Standard for Ethernet - YANG Data Model Definitions*.

None of the current work within the IEEE 802.3 Working Group is targeted to HNT (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 single pair port types and power over Ethernet enhancements though not targeted for HNT use may nevertheless find HNT use.

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 Law
Chair, IEEE 802.3 Ethernet Working Group