IEEE 802.3 Ethernet Working Group
Liaison Communication

Source: IEEE 802.3 Working Group[1]

To: Glenn Parsons   Chair, ITU-T SG15

            Jean-Marie Fromenteau   Rapporteur, ITU-T Q1/15

            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

            Jon Lewis   Secretary, IEEE 802.3 Ethernet Working Group

            Adam Healey   Vice-chair, 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 to at IEEE 802.3 interim teleconference meeting, 15 September 2022

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

Thank you for your liaison statement from December 2021 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.
https://standards.ieee.org/ieee/802.3/10422

---

[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.

As of 22 September 2022, the revision has five approved amendments: IEEE Std 802.3dd-2022, IEEE Std 802.3cs-2022, IEEE Std 802.3db-2022, IEEE Std 802.3ck-2022, and IEEE Std 802.3de-2022.

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 technology, and they continue to be applicable.
- Home gateways typically include both IEEE Std 802.11 specified capabilities and 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 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. IEEE Std 802.3.2-2018 YANG Data Model(s) specifies YANG data models for selected Ethernet port types.

Much of the current work within the IEEE 802.3 Working Group (current activities are listed on the 802.3 home page http://ieee802.org/3) may not be applicable to HNT, but a few recent and current activities are highlighted below as possibly related.

- The IEEE P802.3cx Improved PTP Timestamping Accuracy Task Force draft is currently in IEEE Standards Association ballot. This amendment will improve the precision of delay and jitter measurements, for data carried over Ethernet, capabilities that are leveraged by some time sensitive HNT applications.

Single pair Ethernet port types recently added to IEEE Std 802.3 are also being enhanced by IEEE P802.3da: 10 Mb/s Single Pair Multidrop Segments Enhancement, and P802.3dg: 100 Mb/s Long Reach Single Pair Ethernet. These single pair port types though not targeted for HNT use may nevertheless find HNT use.

The contact information for the chair of IEEE 802.3 in Section 8 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