

## IEEE 802.3 Ethernet Working Group Liaison Communication

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

To:

Steve Trowbridge	Chair, ITU-T Study Group 15 <a href="mailto:steve.trowbridge@alcatel-lucent.com">steve.trowbridge@alcatel-lucent.com</a>
Jean-Marie Fromenteau	Rapporteur, ITU-T Study Group 15, Question 1 <a href="mailto:fromentejm@corning.com">fromentejm@corning.com</a>
Tetsuya Yokotani	Associate Rapporteur, ITU-T Study Group 15, Question 1 <a href="mailto:yokotani.tetsuya@eb.mitsubishielectric.co.jp">yokotani.tetsuya@eb.mitsubishielectric.co.jp</a>
Hiroshi Ota	Advisor, ITU-T Study Group 15 <a href="mailto:hiroshi.ota@itu.int">hiroshi.ota@itu.int</a>
Paul Nikolich	Chair, IEEE 802 LMSC <a href="mailto:p.nikolich@ieee.org">p.nikolich@ieee.org</a>

CC:

Adam Healey	Vice-chair, IEEE 802.3 Ethernet Working Group <a href="mailto:adam.healey@avagotech.com">adam.healey@avagotech.com</a>
Pete Anslow	Secretary, IEEE 802.3 Ethernet Working Group <a href="mailto:panslow@ciena.com">panslow@ciena.com</a>

From: David Law  
[dlaw@hpe.com](mailto:dlaw@hpe.com)

Chair, IEEE 802.3 Ethernet Working Group

Subject: Liaison response to ITU-T Study Group 15 from IEEE 802.3 on HNT standardization work plan

Approval: Agreed to at IEEE 802.3 Plenary meeting, Dallas, TX, USA, 12<sup>th</sup> November 2015

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

Thank you for your liaison statement on the database of Home Network Transport (HNT) Standards work of July 2015. While IEEE Std 802.3 Ethernet is broadly used in home networking, there are other IEEE standards, including other IEEE 802 standards, that have broad usage in home networking. As your list includes home access network technologies, there are many other applicable IEEE standards appropriate for inclusion (e.g., IEEE Std 2030 includes guidelines for Smart Grid communications technologies). We would not attempt to provide an exhaustive list for IEEE or IEEE 802, but are happy to provide further information on Ethernet.

We are pleased to inform you that a new IEEE Std 802.3 revision was approved by the Standards Board on 3 September 2015 and is pending publication as IEEE Std 802.3-2015, *Standard for Ethernet*. There also are a number of active projects underway that should be included on your list.

The following are example applicable technologies in the IEEE 802.3 standard recently approved:

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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.

- 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.
- 10GBASE-T provides a migration path for higher bandwidth home networking.
- Some Ethernet port types would be applicable to HNT needs though use is not common today. For example our BASE-T port types are not appropriate for outdoor cable installation, but fiber optic port types would be acceptable.
- For access technologies, 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 power security equipment).

There also are approved projects and study groups to add capabilities to Ethernet that would be consistent with technologies listed in your database of standards.

- IEEE P802.3bv, Gigabit Ethernet over Plastic Optical Fiber, specifically addresses in-home networking. This project targets providing an easier to install non-conductive media option for home network needs. IEEE P802.3bv has just entered the Working Group ballot stage.
- IEEE P802.3bn EPON Protocol over Coax (EPoC) Task Force proposes new EPON access capabilities. It has just entered the Sponsor ballot phase.
- The IEEE P802.3br Interspersing Express Traffic (IET) Task Force is about to enter the Sponsor ballot phase. This adds capabilities to reduce message latency for time sensitive networking, which among other things provides enhanced capabilities for multimedia, gaming and other applications becoming more common in the home.
- The IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force is currently in the Task Force review phase. This project will support devices requiring higher power than currently supported in IEEE Std 802.3.
- The IEEE P802.3bz 2.5G/5GBASE-T Task Force has just entered the Working Group ballot phase. This project proposes new speeds of operation between our current 1 Gb/s and 10 Gb/s speeds on twisted pair, and would likely find acceptance where higher than 1 Gb/s operation is needed in the home.
- The recently formed IEEE P802.3ca 25 Gb/s, 50 Gb/s, and 100 Gb/s Ethernet Passive Optical Networks Task Force will focus on development of symmetric and asymmetric data rate 25G-EPON, 50G-EPON, and 100G-EPON PHYs, supporting operation over point-to-multipoint fiber-based subscriber access networks

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