

IEEE 802.3 Ethernet Working Group Liaison Communication

Source: IEEE 802.3 Working Group¹

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Subject: Information on activities in the Access Network Transport area in IEEE 802.3 WG

From: David Law – Chair, IEEE 802.3 Ethernet Working Group (dlaw@hp.com)

Approval: Agreed to at IEEE 802.3 Plenary meeting, San Diego, CA, USA, 19 July 2012

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

Following the liaison exchange between our groups on the topic of OTNT Standardization Work Plan, we would like to update you on the activities within the IEEE 802.3 Working Group, which might be of interest for the Access Network Transport group.

There are currently two active groups working on access-related projects:

- The *Extended EPON* P802.3bk Task Force, which is adding new PMDs for 1G-EPON and 10G-EPON:
 - PX30 for 1G-EPON, for operation at the distance of 20 km (or more) and the split of 1:32 (or more);
 - PX40 for 1G-EPON, for operation at the distance of 20 km (or more) and the split of 1:64 (or more);
 - PR40 for 10/10G-EPON, for operation at the distance of 20 km (or more) and the split of 1:64 (or more);
 - PRX40 for 10/1G-EPON, for operation at the distance of 20 km (or more) and the split of 1:64 (or more);

The P802.3bk Task Force is also studying alternatives for achieving longer reach and/or higher split ratios, through the use of power budget extenders (PBEx). The Task Force review on draft D1.0 was completed by the 9th of July 2012, and the P802.3bk Task Force is expecting to start the 802.3 Working Group ballot out of the November 2012 plenary meeting.

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.

More information about the P802.3bk Task Force can be found at <http://www.ieee802.org/3/bk/index.html>, including the PAR, 5 Criteria and Objectives for this project.

- The *EPON Protocol over Coax (EPoC)* P802.3bn Task Force is beginning its work on the development of a PHY for the operation of EPON protocols over coaxial distribution networks. The EPoC PHY is intended to support:
 - symmetric and asymmetric (downstream / upstream) data rates;
 - symmetric and asymmetric (downstream / upstream) spectrum allocation;
 - independent configuration of downstream and upstream link parameters;
 - a baseline data rate of 1 Gbit/s downstream and upstream, when operating within up to 120 MHz of allocated spectrum, under defined baseline plant conditions;
 - a data rate lower than the baseline data rate when transmitting in less than 120 MHz of assigned spectrum or under poorer than defined plant conditions;
 - a data rate higher than the 1Gb/s baseline data rate and up to 10 Gb/s when transmitting in assigned spectrum and in channel conditions that permit.

Moreover, one of the primary requirements for this project is to maintain compatibility with 1G-EPON and 10G-EPON, as currently defined in IEEE Std 802.3, with minimal augmentation to MPCP and/or OAM if needed to support the new PHY.

More information about the P802.3bn Task Force can be found at <http://www.ieee802.org/3/bn/index.html>, including the PAR, 5 Criteria and Objectives for this project.

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