IEEE 802.3 Ethernet Working Group
Liaison Communication

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From: IEEE 802.3 Ethernet Working Group[1]

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

Date: July 19, 2012

Approval: Agreed to at IEEE 802.3 Plenary meeting, San Diego, CA, July 19, 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* IEEE P802.3bk Task Force, which is adding new PMDs for 1G-EPON and 10G-EPON:

    o PX30 for 1G-EPON, for operation at the distance of 20 km (or more) and the split of 1:32 (or more);

    o PX40 for 1G-EPON, for operation at the distance of 20 km (or more) and the split of 1:64 (or more);

    o PR40 for 10/10G-EPON, for operation at the distance of 20 km (or more) and the split of 1:64 (or more);

    o PRX40 for 10/1G-EPON, for operation at the distance of 20 km (or more) and the split of 1:64 (or more);

    The IEEE 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 IEEE P802.3bk Task Force is expecting to start the IEEE 802.3 Working Group ballot out of the November 2012 plenary meeting.

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[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 IEEE 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)* IEEE 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:

    o symmetric and asymmetric (downstream / upstream) data rates;

    o symmetric and asymmetric (downstream / upstream) spectrum allocation;

    o independent configuration of downstream and upstream link parameters;

    o 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;

    o 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;

    o 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 IEEE 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,

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