IEEE 802.3 Ethernet Working Group
Liaison Communication

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From: IEEE 802.3 Ethernet Working Group[1]

Subject: Liaison reply from IEEE 802.3 to ITU-T SG15 regarding the OTNT Standardization Work Plan

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,

The IEEE 802.3 Ethernet Working Group thanks ITU-T Study Group 15 for your liaison and the opportunity to review and comment on the "Optical Transport Networks & Technologies Standardization Work Plan" coming out of your December 2011 meeting. We have reviewed the OTNT Plan content in consideration of the standardization activities in progress within the IEEE 802.3 Working Group and have the following comments:

We are happy to report that the latest IEEE 802.3 revision project has been completed, and the resulting IEEE Std 802.3-2012 with the new title "Standard for Ethernet" has just been approved by the Standards Board. This document supersedes IEEE Std 802.3-2008, plus the following amendments and corrigendum:

- IEEE Std 802.3av-2009 (10G-EPON)

- IEEE Std 802.3bc-2009 (LLDP)

- IEEE Std 802.3at-2009 (DTE power enhancements)

- IEEE Std 802.3-2008/Cor1-2009

- IEEE Std 802.3ba-2010 (40Gb/s and 100Gb/s Ethernet)

- IEEE Std 802.3az-2010 (Energy Efficient Ethernet)

- IEEE Std 802.3bg-2011 (Serial 40 Gb/s Ethernet)

- IEEE Std 802.3bf-2011 (Time Synchronization Protocol Support)

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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.

- IEEE Std 802.3bd-2011 (MAC Control Frame for Priority-based Flow Control)

Note that all of the above are now incorporated into the base standard and the material can be found in the relevant clauses of the newly approved IEEE Std 802.3-2012.

IEEE Std 802.3.1-2011(Ethernet MIBs) was published on 5 July 2011. This incorporates and updates all Ethernet MIBs previously under the responsibility of IETF for managing all capabilities in the base version of the standard IEEE Std 802.3-2008. There is currently a revision project underway which will incorporate new and revised MIBs to support all of the amendments that have been incorporated in IEEE Std 802.3-2012, and these two documents are expected to be in full alignment once this revision is complete. The revision of IEEE Std 802.3.1 is in the Working Group ballot phase.

The following projects are currently active within the IEEE 802.3 working group:

- IEEE P802.3.1 (IEEE P802.3.1a) (Revision to IEEE Std 802.3.1-2011 Ethernet MIBs Task Force), is expected to lead to a revision of IEEE Std 802.3.1-2011 which incorporates MIBs for all of the amendments to IEEE Std 802.3-2008. This project is in the Working Group ballot phase.

- IEEE P802.3bj (100 Gb/s Backplane and Copper Cable Task Force) is currently in the task force review phase.

- The IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet task force has just been formed, having completed the Study Group phase which produced the project authorization request (PAR), "5-criteria" responses, and project objectives.

- The IEEE P802.3bk Extended EPON task force is currently in the task force review phase.

- The IEEE P802.3bn EPON over Coax PHY task force has just been formed, having completed the Study Group phase which produced the PAR, "5-criteria" responses, and project objectives.

- The IEEE 802.3 Reduced Twisted Pair Gigabit Ethernet (RTPGE) study group is investigating producing a new Gigabit Ethernet PHY to operate over fewer pairs of twisted pair cabling, targeted at automotive and industrial control applications.

- A new IEEE 802.3 Study Group has been formed to investigate providing next generation BASE-T (twisted pair) interfaces.

Specific suggestions concerning the content of your document include:

- The wording and organization of clause 5.5.1.1 on High bit rate and long reach interfaces seems dated, given that 10 Gb/s interfaces have been standardized since 2002 and 40 Gb/s and 100 Gb/s interfaces since 2010. In addition, now that all of the text has been integrated into the 2012 base standard, it may not be necessary (or helpful, since the project names will not help readers to find the relevant clauses) to call out specific projects which specified the standards, but perhaps instead should list specific PMDs or specific clauses, for example 40GBASE-KR4/CR4/SR4/LR4/FR and 100GBASE-CR10/SR10/LR4/ER4 specified in clauses 80 to 89, and the 10G EPON interfaces 10GBASE-PR/PRX specified in clauses 75 to 77. Similarly, clause 5.5.1.2 on Ethernet-based access networks describes interfaces in terms of project names such as 802.3ah and 802.3av, which will not be helpful to a reader to find the relevant clauses in the 2012

version of the standard. It may be more helpful to describe this work in terms of the actual specified PMDs, specifically 2BASE-TL, 10PASS-TS, 100BASE-LX10/BX10, 1000BASE-LX10/BX10, 1000BASE-PX10/PX20 (1G-EPON), and 10GBASE-PR/PRX (10G-EPON).

- The status of work as described above should be reflected in clause 5.5.1.9.

- The row "Physical Layer Aspects" in Table 5-3 could list only IEEE Std 802.3, now that 802.3av, 802.3ba, and 802.3bg are integrated into the 2012 version of the base standard.

- In Table 7.1.3, the first row for 802.3 should have the reference updated to IEEE Std 802.3-2012 and the title amended to "Standard for Ethernet". The subsequent rows of the table for 802.3at, 802.3av, 802.3ba, 802.3az, 802.3bc, and 802.3/Cor1 can all be deleted as these are all now integrated into the 2012 base standard.

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 continuing cooperation with ITU-T SG15 in the future.

Sincerely,

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