IEEE 802.3 Ethernet Working Group Liaison Communication

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From: IEEE 802.3 Ethernet Working Group[1]

Subject: Liaison reply to TR-42 Liaison to IEEE 802.3 Working Group, TR42-2012-10-194A

Date: 15th November 2012

Approval: IEEE 802.3 Plenary meeting, San Antonio, TX, USA 15th November 2012

Dear Mr. Jensen,

The IEEE 802.3 Working Group thanks TR42 for their offer of assistance in making the Next Generation BASE-T project a success; for providing the draft specifications for the newly developed Category 8 cabling and the summary of the channel transmission parameters.

Please find below the IEEE 802.3 Next Generation BASE-T Study Group objectives adopted September 25, 2012.

<u>Objectives adopted September 25, 2012</u>

- Support full duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support a BER better than or equal to 10-12 at the MAC/PLS service interface
- Support Auto-Negotiation (Clause 28)
- Support optional Energy Efficient Ethernet
- Support local area networks using point-to-point links over structured cabling topologies, including directly connected link segments

[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.

- Do not preclude meeting FCC and CISPR EMC requirements
- Support a data rate of 40 Gb/s at the MAC/PLS Service Interface

Regarding your specific request for input;

- Insertion loss of the channel (link segment)
  - Target link segment insertion loss has not been determined.
- Targeted cabling configurations including reach and topology
  - Point-to-point links over structured cabling topologies, including directly connected link segments.
  - The Study Group has agreed to adopt as an objective a 2-connector channel model.
  - The primary application of NGBASE-T will be End-of-Row (EoR) and Top-of-Rack (ToR) links in the data center with a focus on server-to-switch connectivity.
  - Although the SG has not yet adopted a reach objective, it would be valuable to define a new 2-connector channel topology for EoR links, spanning 20 or so cabinets. This would allow designers to optimize silicon solutions and hence reduce complexity, power consumption and cost.
- Bandwidth of the specification
  - Support a data rate of 40 Gb/s
  - Target link segment bandwidth has not been determined.

We look forward to working with you in making the Next Generation BASE-T project a success.

Sincerely,

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