

IEEE 802.3 Ethernet Working Group Liaison Communication

To: TIA Subcommittee TR-42.11
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John D'Ambrosia, Chair, IEEE 802.3 400 Gb/s Ethernet Study Group

From: IEEE 802.3 Ethernet Working Group

Subject: Liaison letter to TIA Subcommittee TR-42.11 regarding harmonization of single-mode connection Return Loss

Date: July 18, 2013

Approval: Agreed to at 802.3 Plenary meeting, Geneva, Switzerland, 18 July 2013

Dear Mr. Kolesar and members of the TR-42.11 subcommittee,

The 802.3 Ethernet Working Group is working on next generation and higher speed Ethernet projects such as 400 Gigabit Ethernet. A consistent challenge the Working Group is seeing is the need to develop solutions that align with the industry goals of lower power and lower cost implementations. This is especially true, but not limited to, data center applications. Minimizing the implementation complexity that is necessary to overcome channel impairments is a key approach to achieving these goals of reduced power and cost application solutions.

The IEEE 802.3 400 Gb/s Ethernet Study Group met the week of July 15 at the IEEE 802 Plenary. It was highlighted in the following contribution:
http://www.ieee802.org/3/400GSG/public/13_07/bhatt_400_01a_0713.pdf
that an inconsistency exists between TIA and ISO/IEC with regards to return loss specifications for single-mode fiber. This inconsistency could increase implementation complexity for some of these next generation Ethernet solutions.

The 802.3 Ethernet Working Group requests that, to accommodate cabling infrastructure performance requirements that will be required by these optimized future Ethernet solutions, the TR-42.11 subcommittee consider harmonizing with ISO/IEC 11801 the Return Loss specification for single-mode connections to 35 dB, as part of the revision to TIA-568-D. The Return Loss value of 35 dB represents a balanced choice when taking into account factors like performance improvement, harmonization of global specifications, and state of the art of technology today.

We would appreciate any feedback that TR-42.11 Subcommittee may have regarding this request and look forward to any future collaboration.

Sincerely,

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