IEEE 802.3 Ethernet Task Force Liaison Communication

Source: IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force [1]

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Subject: Liaison to ISO/IEC/JTC1 SC25 WG3

Approval: Agreed to at IEEE 802.3 Interim meeting, Macau, China, March 17, 2016

Dear Dr. Oehler,

IEEE 802.3 would like to thank you for your reply 25N2545. You asked for some further clarification, and our responses follow.

1) Will power be disconnected concurrently on all 4 pairs?

There are two allowable approaches: one that electronically switches the 4 pairs together and one that electronically switches each 2 pairs independently (1-2, 3-6 and 4-5, 7-8). The approach that electronically switches the 2 pairs independently are allowed to have two instances of the power supply. The standard has a requirement that the voltage difference between the two instances is 10mV max.

2) Will power be disconnected separately 2 pairs at a time?

Breaking the circuit, and pin order in which this takes place, is completely dependent on the connector.

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[1] This document solely represents the views of the IEEE 802.3, and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

3) Is it possible for one or more conductors to carry the total four pair current for short period during disconnection?

> Two conductors may each carry the total four pair current for short periods of time during disconnect. The spec requires the PSE current limit to be below 1.75A within 8.2msec and then is electronically disconnected within 75msec.

Additionally, please find attached models to assist you in simulating disconnection under load.

Thank you for the update on the status of ISO/IEC TR 29125 and confirmation that it has been elevated to a PDTR. Also thank you for providing a copy of the document for our review. It has been posted to the 802.3 private area and the link has been provided to the IEEE P802.3bt Task Force. There are no questions or comments at this time but any feedback we have will be provided after our next meeting the week of May 23rd.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group