IEEE 802.3 Ethernet Working Group

# Liaison Communication

Source: IEEE 802.3 Working Group

To: Herb Congdon – Chair, TIA TR-42

Copy: Robert Jensen – Vice Chair, TIA TR-42
Paul Nikolich –Chair, LAN/MAN Standards Committee
Wael William Diab – Secretary, IEEE 802.3
Chris DiMinico – Liaison to TIA TR-42
Valerie Rybinski – Liaison form TIA TR-42
Mike McCormack, Chair, IEEE P802.3at Task Force

From: Robert M. Grow – Chair, IEEE 802.3

Approval: Agreed to at IEEE 802.3 Plenary meeting, San Francisco, July 2007

Reference: Communication to TIA TR-42 regarding IEEE P802.3at Power via the MDI Enhancements

For: Information

Contact Bob Grow, Chair, IEEE 802.3

Dear Colleagues:

Thank you for the feedback that was presented by Ms. Rybinski at our July 2007 Plenary.

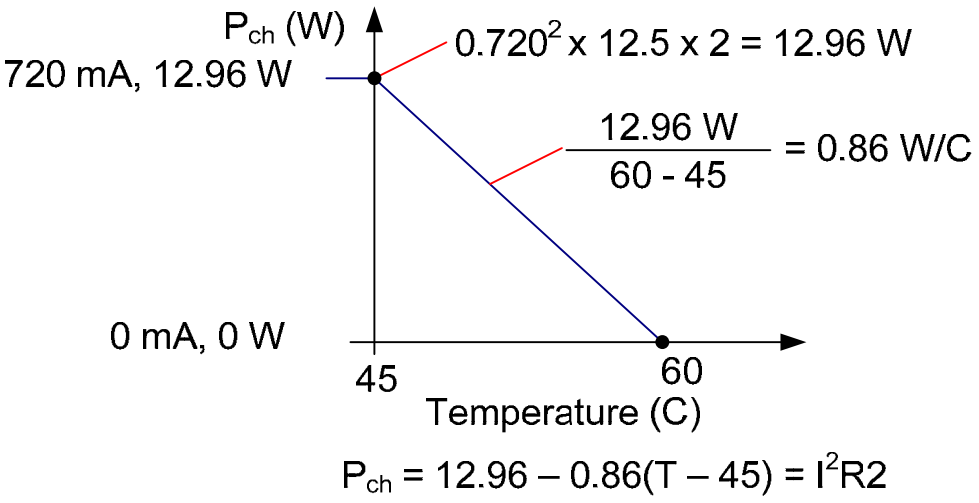
We look forward to your work on the current-carrying draft.

We also have a few clarification questions on some of the prior contributions and the liaison responses:

1. Regarding the January contribution (Please refer to the following link page 5 of http://www.ieee802.org/3/at/public/jan07/0107_TR42_1.pdf), there seems to be some confusion as to whether it is the current per cable, the total power or both that needs to be de-rated to 0mA. Some in the group have interpreted the contribution to mean that cables carrying full load at 720 mA (stated at 45C) can still operate near 60C so long as the total power in the cable bundle is under the maximum recommendation. Please affirm if this is the case or if the 720 mA (stated at 45C) has to be de-rated to 0mA on each individual cable.
2. Regarding the January contribution (Please refer to the following link pages 5 and 6 of http://www.ieee802.org/3/at/public/jan07/0107_TR42_1.pdf), has there been any new work done to determine what the TBDs listed, specifically:
    a. 60C page 5 second bullet
    b. 5000W page 5 second bullet
    c. 60C page 5 third bullet
    d. 5000W page 6 third bullet
3. Regarding the de-rating recommendation per bundle, are you planning to include a mechanism in your TSB to allow compliance with such a recommendation? If not, how will the end customers be able to comply with such a recommendation?

a. Are there any similar mechanisms in place that are already used in the cable plant design process?

4. We look forward to your draft on current-carrying capacity. Will the bundle power limit be included in the draft? Please clarify and/or share a draft of your work with our group?
5. Can you provide us a continuous de-rating graph that shows the amount of current a cable is capable of carrying on 4-Pairs vs. the ambient temperature, over the 25C to 60C temperature range? If not, can you provide additional data points on the current-carrying capacity at 50C, 55C and 60C?
6. Can you provide us a continuous de-rating graph that shows the amount of power a cable bundle is capable of carrying on 4-Pairs vs. the ambient temperature, over the 25C to 60C temperature range? If not, can you provide additional data points on the power bundle capacity at 50C, 55C and 60C?
7. Can you please clarify what the 5000W number that appears in the contribution from January (Please refer to following link pages 5 and 6 of http://www.ieee802.org/3/at/public/jan07/0107_TR42_1.pdf), is this the power at the PD or at the PSE?
8. Regarding our previous communication to you, the graph that was included (reproduced below) was intended to show the power dissipation in the channel not that of the PD. To that effect, our question is repeated again. Please see the attached graph. Does this graph accurately reflect your de-rating guidance per the technical contribution (Please refer to following link http://www.ieee802.org/3/at/public/jan07/0107_TR42_1.pdf)?




Best Regards

Robert M. Grow, Chair
IEEE 802.3 Ethernet Working Group