



Usage of the term 'shield' (Comment #280 & #281)

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A few observations

- ▶ Shielding only applies to the link segment
- ▶ It does not have any further impact on functional behavior
- ▶ 802.3cg also uses shielded link segments for 10BASE-T1L, but that clause 146 is not flooded with the word 'shield'
- ▶ In fact 'shield*' only occurs 7 times in 802.3cg
 - One of them in the references
 - All other 6 are in the link segment sub-clause
- ▶ The PHY definition of 10BASE-T1L does not include the word shield in the PHY definition

What is a considered 'link segment'?

- ▶ Can obviously be a 'cable assembly' between MDI connectors
- ▶ If PHY modules are connected via a large PCB, possibly with board-to-board connectors, would that PCB be considered as "link segment"?
 - Task group response clearly 'yes'
- ▶ We don't seem to say anywhere that the "link segment" shall be shielded
 - There seem no need to do that either

How to approach this in Clause 149

- ▶ 149.7 Link segment characteristics
 - 2.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 are designed to operate over a single shielded balanced pair of conductors that meet the requirements specified in this subclause. ~~The single shielded balanced pair of conductors supports an effective data rate of 2.5 Gb/s, 5 Gb/s, and 10 Gb/s in each direction simultaneously.~~ The term “link segment” used in this clause refers to a single shielded balanced pair of conductors operating in full duplex.
- ▶ Furthermore, ‘shield’ rightfully appears in the link segment specification details related to shielding performance.
- ▶ All other occasions of the word ‘shield’, ‘shielded’, or ‘shielding’ are redundant.

Desired actions

- ▶ Restrict usage of the word 'shield' to the link segment sub-clause and annexes related to that sub-clause
- ▶ Remove occurrences of the word shield (and derivatives like shielded, shielding) from all other clauses of the CH draft spec
- ▶ Review the link segment sub-clause in the next ballot on appropriate usage of the word 'shield'
- ▶ Probably need to add information to the link segment sub-clause to clarify that alternative link segments - not based on shielded cable - may be possible



End