

IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet 5th Sponsor recirculation ballot comments

Cl 000 SC 0 P0 L0 # r05-1

Turner, Michelle

Comment Type G Comment Status D

This draft meets all editorial requirements.

SuggestedRemedy

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 138 SC 138.8.5 P273 L47 # r05-2

Dawe, Piers J G

Mellanox Technologies

Comment Type TR Comment Status D

As noted in previous comments, the combination of all penalties for the MMF PMDs, which is much higher than for SMF, is too high. See http://iee802.org/3/cm/public/adhoc/dawe_3cm_adhoc_01_092718.pdf
Also the relation between measured TDECQ and penalties in service should be improved.

SuggestedRemedy

Insert:

Equation (138-1) is used in place of Equation (121-11).

$R = \sqrt{\sigma G^2 + \sigma S^2 - M^2}$ (138-1)

where $M = 0.0075P_{ave}$

[Note to reader: Pave is already defined in 121.8.5.3]

In 138.8.10 Stressed receiver sensitivity, e.g. at page 275 line 46, insert:
the values of M in Equation (138-1) is set to zero, and

Proposed Response Response Status W

PROPOSED REJECT.

Insufficient evidence has been provided to show that the penalty is large enough to warrant a change to the link budget. See king_3cd_01_1018 to be reviewed by the task force.

For task force discussion.

The response to a similar comment r04-11 was:
REJECT.

Presentation <http://www.ieee802.org/3/cd/public/Sept18/dawe_3cd_01b_0918.pdf> was reviewed.

Previous analysis has shown that the penalty for modal noise is significantly less than 0.1 dB for NRZ. Insufficient evidence has been provided to show that the penalty is large enough to warrant a change to the link budget.

See the following for previous analysis:

http://www.ieee802.org/3/aq/public/nov04/pepeljugoski_1_1104.pdf

There was no support to make a change.

Also, see response to r04-12.

The response to another similar comment r04-12 (to which r04-11 refers) was:
REJECT.

This comment is similar to R03-27.

100GBASE-SR4 does not include receiver equalization, whereas the 100GBASE-SR2 does; therefore the penalty for each cannot be easily compared.

PAM4 transmitters for MMF with measured TDECQ values up to 5 dB have been shown in

http://www.ieee802.org/3/cd/public/May18/king_3cd_03_0518.pdf,

http://www.ieee802.org/3/cd/public/May18/dawe_3cd_01b_0518.pdf (slide 9), and in

http://www.ieee802.org/3/cd/public/July18/king_3cd_02a_0718.pdf (slide 12)

which supports the P802.3cd draft 3.4 TDECQ limit of 4.5 dB, taking account of product variability with larger sample sizes.

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http://www.ieee802.org/3/cd/public/July18/king_3cd_02a_0718.pdf also shows receiver sensitivity vs estimated SECQ for values up to 4 dB with no indication of problems. The current TDECQ limit was arrived at as a compromise between transmitter and receiver capabilities.

The URLs for the presentations cited by the commenter and not called out above are:

http://www.ieee802.org/3/cd/public/Jan18/king_3cd_02_0118.pdf

http://www.ieee802.org/3/cd/public/adhoc/archive/chang_011018_3cd_01_adhoc-v2.pdf

http://www.ieee802.org/3/cd/public/May18/dawe_3cd_01b_0518.pdf

Presentation <http://www.ieee802.org/3/cd/public/Sept18/dawe_3cd_01b_0918.pdf> was reviewed.

There was no support to make a change.