

IEEE 802.3db D2.0 100G, 200G, 400G Short Reach Fiber Task Force Initial Working Group ballot commen

CI 167 SC 167.7.2 P53 L44 # 40

Ghiasi, Ali Ghiasi Quantum/Marvell

Comment Type TR Comment Status R

It was shown that TDECQ with MMSE is accurate and reduce test time and associated test cost.

https://www.ieee802.org/3/db/public/September-09-September-29-2021/ghiasi_802.3db_01_092321.pdf

SuggestedRemedy

MMSE is representative of real receiver and a full grid search may produce results slightly better, as shown by in Ghiasi contribution there is excellent correlation for scope measurements. MMSE will reduce test time specilay given 802.3db reference receiver is 9 taps will longer to do full grid search and will increase test cost.

Response Response Status U

REJECT.

No specific proposal was presented. A straw poll did not show consensus for a change.

Straw Poll:

I support replacing the existing method of optimizing TDECQ with an MMSE approach

Yes 4

No 5

Abstain 9

Need more information 3

CI 167 SC 167.9.1 P59 L54 # 69

Wienckowski, Natalie General Motors

Comment Type TR Comment Status A

Should refer to Annex J. IEC 60950-1 is obsolete.

SuggestedRemedy

Change: All equipment subject to this clause shall conform to IEC 60950-1.

To: All equipment meeting this standard shall conform to the general safety requirements as specified in J.2.

Response Response Status U

ACCEPT IN PRINCIPLE.

See also comments #95 and 177

Change this sentence to "All equipment subject to this clause shall conform to J.2."

CI 167 SC 167.7.1 P51 L28 # 195

Dawe, Piers Nvidia

Comment Type TR Comment Status R

As the channel or signal is relatively slower than for any other optical PMDs so far, we should expect higher Ceq, contributing to TDECQ, but we should not expect higher K because we have 9 taps rather than 5, and 2% threshold adjust rather than 1%. We expect that TDECQ, Ceq and K measurements with 2% threshold adjust will be more accurate than for previous specs, so we need less padding for measurement issues. We should re-optimize the spec considering these things, encouraging good equalisable signals both after and before the fibre. The K' limit can catch some bad transmitters that an overshoot limit intended to pass all good signals would miss - and K' is a free by-product of TECQ. The K' limit is similar to VEC in C2M and EVM in coherent: a screen for signals that are bad after equalisation.

SuggestedRemedy

Insert row for K'=TECQ-10.log10(Ceq'), limit 4 dB (where K' and Ceq' are the two parts of TECQ as K and Ceq are the two parts of TDECQ). For both VR and SR.

Response Response Status U

REJECT.

Based on Straw Poll:

I favor including a limit on K' for

VR 2

SR 0

Both 1

Neither 5

Abstain 9

02.3db D2.1 100G, 200G, 400G Short Reach Fiber Task Force 1st Working Group recirculation ballot con

Cl 167 SC 167.8.1 P53 L20 # 1

Ghiasi, Ali Ghiasi Quantum/Marvell

Comment Type TR Comment Status R

There is no definition of valid 100GBASE-ZV1/SR1, etc., instead you should reference the PCS signal

SuggestedRemedy

Please replace PMD signals with PCS signals, 100GBASE-R with CL91 RS-FEC, 200GBASE-R, or 400GBASE-R signals

Response Response Status U

REJECT.
Multimode clauses 86, 95, 138, and 150 have defined "valid <PMD name> signal" as a test pattern. To keep consistency with past multimode clauses, no change will be made to Table 167-11.

Cl 167 SC 167.8.14.1 P57 L57 # 3

Ghiasi, Ali Ghiasi Quantum/Marvell

Comment Type TR Comment Status R

db draft reference CL 121.8.9 for stress receiver sensitivity and this clause include sinusoidal jitter mask, if we are referencing CL121 why duplicate jitter mask in the db CL 167?

SuggestedRemedy

Remove CL 167.8.14.1

Response Response Status U

REJECT.
Past multimode clauses 95, 138 and 150 have carried the description of the sinusoidal jitter for testing receiver jitter tolerance.

There is no other clause with a description of 100G per lane sinusoidal jitter mask.

Cl 167 SC 167.7.1 P49 L27 # 6

Ghiasi, Ali Ghiasi Quantum/Marvell

Comment Type TR Comment Status R

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SuggestedRemedy

MMSE is representative of real receiver and a full grid search may produce results slightly better, as shown by in Ghiasi contribution there is excellent correlation for scope measurements. MMSE will reduce test time slightly given 802.3db reference receiver is 9 taps will longer to do full grid search and will increase test cost. Full grid search may produce as much as 0.2 dB of lower TDECQ than real receiver and pushing real TDECQ>4.5 dB is risky. Task force need to make a decision either stay with full grid search and reduce TDECQ to 4.3 dB or stay with current 4.4 dB with MMSE.

Response Response Status U

REJECT.

Based on straw poll, decision is to make no change to the draft.

Straw poll (Chicago rules):

- a) Make no change to the draft
- b) Adopt MMSE search method with maximum TDECQ of 4.4 dB
- c) Maintain current TDECQ methodology, but reduce maximum TDECQ to 4.3 dB

Vote: a) 15/37, b) 7/37, c) 11/37

No answer 14/37

Straw poll (Decisional):

- A) Reject: make no change to the draft.
- B) Accept in principle: Maintain current TDECQ methodology, but reduce maximum TDECQ to 4.3 dB.

Vote: A) 15/35, B) 8/35

No answer 12/35