

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

Cl 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

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Should refer to Annex J. IEC 60950-1 is obsolete.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

Cl 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 $K' = \text{TECQ} - 10 \cdot \log_{10}(\text{Ceq})$, 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