

802.3db D3.0 100 Gb/s, 200 Gb/s, and 400 Gb/s Short Reach Fiber Task Force Initial Sponsor ballot com

Cl **FM** SC **FM** P**3** L**3** # **I-22**

Grow, Robert RMG Consulting

Comment Type **TR** Comment Status **A**

The reach numbers are confusing. What makes the difference between 50 m and 100 m reach? Further, the numbers do not agree with Table 167-6.

SuggestedRemedy

Delete "up to 50 m and".

Response Response Status **U**

ACCEPT IN PRINCIPLE.

Change "This amendment to IEEE Std 802.3-202x adds Physical Layer specifications and Management Parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet optical interfaces for reaches up to 50 m and up to 100 m based on 100 Gb/s per wavelength optical signaling."

to
"This amendment to IEEE Std 802.3-202x adds Physical Layer specifications and Management Parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s Ethernet optical interfaces based on 100 Gb/s per wavelength optical signaling over multimode fiber."

Prior examples:

802.3cd

"Clause 131 through Clause 140 and Annex 135A through Annex 136D are added to IEEE Std 802.3-2018 by this amendment to specify IEEE 802.3 Media Access Control (MAC) parameters, Physical Layer specifications, and management parameters for the transfer of IEEE 802.3 format frames at 50 Gb/s, 100 Gb/s, and 200 Gb/s."

802.3cu

"This amendment to IEEE Std 802.3-2018 adds Physical Layer specifications and management parameters for 100 Gb/s and 400 Gb/s Ethernet optical interfaces for reaches up to 10 km based on 100 Gb/s per wavelength optical signaling."

802.3cm

"This amendment to IEEE Std 802.3-2018 adds Clause 150. This amendment adds Physical Layer (PHY) specifications and management parameters for 400 Gb/s operation on four pairs (400GBASE-SR4.2) and eight pairs (400GBASE-SR8) of multimode fiber, over reaches of at least 100 m."

Cl **FM** SC **FM** P**4** L**9** # **I-23**

Grow, Robert RMG Consulting

Comment Type **ER** Comment Status **A**

The front matter mandatory text in this draft is not current. (Not having FrameMaker, I checked the 2021 Word front matter template and P802.3/D3.2 finding they agree.) I find multiple differences on page 4 in the legal language required for a standard. I note the IMPORTANT NOTE that precedes the Participant list is missing.

SuggestedRemedy

Update to text found in current IEEE SA template (<https://standards.ieee.org/develop/drafting-standard/resources/>).

Response Response Status **U**

ACCEPT.

Cl **167** SC **167.7.1** P**52** L**29** # **I-36**

Dawe, Piers J G NVIDIA

Comment Type **TR** Comment Status **R**

In VR, the difference between TP2 and TP3 in VR is small so an unfortunately set-up VR transmitter can be in the top left corner of the TDECQ map while still meeting the TDECQ and overshoot specs. With the extra taps and threshold adjust range in this clause's TDECQ it would be well equalised, so there won't be so much padding, conservatism and need for measurement margin vs. TDECQ and TECQ as in earlier clauses, so signals near the nominal spec limits are a concern.

This bad signal has high K' and high but legal overshoot, a bad combination for receivers. Yet the point of a separate VR spec was to allow slower transmitters than are needed for SR, so VR transmitters should not be in this corner.

This is worse at TP2 than after a minimum-bandwidth optical channel at TP3. The K' limit is similar to VEC in C2M and EVM in coherent: a screen for signals that are bad after equalisation. As it is a free by-product of the TECQ measurement, we can add it to exclude these untypical signals that don't benefit transmitter makers but are bad for receivers.

SuggestedRemedy

For VR, insert a row for $K' = \text{TECQ} - 10 \cdot \log_{10}(\text{Ce}q)$, limit 4.4 dB, same as the TECQ limit. K' and Ceq' are the two parts of TECQ as K and Ceq are the two parts of TDECQ.

Response Response Status **U**

REJECT.

Reviewed the presentation
https://www.ieee802.org/3/db/public/May22/dawe_3db_01_051922.pdf.

The proposal for adding a specification for K'(max) did not have any support.