Cl **157** *SC* **157.2.4** *P* **44** *L* **35** # 237

Thompson, Geoff GraCaSI S.A./Independent

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

The statement "The PMA also may provide an observable electrical interface for the 25GAUI or 50GAUI chip-to-chip 35 (C2C) or chip-to-module (C2M)." has no meaning within the scope of the standard. Anything that is not forbidden in the standard may be provided.

SuggestedRemedy

If optional standardized test points are specified or called out then say so. If that is not the case then delete the text.

Response *Response Status* **U**

REJECT.
This follows last sentence in 105.3.4

Cl **157** *SC* **157.4** *P* **45** *L* **18** # 238

Thompson, Geoff GraCaSI S.A./Independent

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

I believe that PAUSE operation is not the only reason that demands that there be an upper bound on the propagation delays through the network. I am given to understand that both maximum and minimum transit time need to be specified to support TSN.

SuggestedRemedy

Generalize the reasons for specifying delay and include specification of minimum delay as well.

Response *Response Status* **U**

REJECT.
Remedy is not specific enough.
Can you please provide an 802.3 reference clause for the minimum delay constraint spec?

Cl **160** *SC* **160.7.4** *P* **111** *L* **37** # 44

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **R** *refer-copy*

Too much repetition

SuggestedRemedy

Refer to other clauses, for several subclauses here

Response *Response Status* **U**

REJECT.
This material is included in Clause 139. It follows the recent style of the subclause of definition of optical parameters and measurement methods

Cl **160** *SC* **160.6.1** *P* **113** *L* **28** # 14

Dawe, Piers Nvidia

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

It is very unwise to delete the limit on K = 10log10(Ceq), and also unwise to to add the over/under-shoot and transmitter power excursion (max) limits (see the latest P802.3cu draft). These three limits protect the receiver from different stressful signals that the ideal reference receiver with infinite resolution and perfect linearity reports have acceptable TDECQ, but real receivers designed to realistic cost and power objectives struggle with.

SuggestedRemedy

Reinstate the limit on K = 10log10(Ceq).
Add over/under-shoot and transmitter power excursion (max) limits as in the latest P802.3cu draft.

Response *Response Status* **U**

REJECT.

For the first suggested remedy of "Reinstate the limit on K = 10log10(Ceq)", cp follows the removal of “K = 10log10(Ceq)” in P802.3cu. The latest decision from P802.3cu supports removal of K. In the case it will be necessary to include full refererences:
•In P802.3cu resolution to comment #2 to D1.1 it was agreed to remove K = 10log10(Ceq) and replace with several other parameters like TECQ and TDECQ – TECQ.
•In P802.3cu resolution to comment #87 to D2.0, a proposal to reinstate K = 10log10(Ceq) was rejected.
•In P802.3cu resolution to comment #30 to D2.1, another proposal to reinstate K = 10log10(Ceq) was rejected, referring to comment #87 to D2.0.

For the second suggested remedy of “Add over/under-shoot and transmitter power excursion (max) limits as in the latest P802.3cu draft”, the commenter has not provided any evidence that these requirements are necessary for 50 Gb/s PAM4 applications and that adding those would increase the quality of the draft.

Cl **160** *SC* **160.7.4** *P* **118** *L* **25** # 4

Dawe, Piers Nvidia

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

Too much duplication

SuggestedRemedy

Refer to other clauses, for several subclauses here

Response *Response Status* **U**

REJECT.

This is the same as D2.1 Comment #44.

This material is included in Clause 139. It follows the recent style of the subclause of definition of optical parameters and measurement methods.

Cl **160** *SC* **160.6.1** *P* **125** *L* **30** # 37

Dawe, Piers
Nvidia

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

Following up on D2.2 comment 14: PAM4 receivers need protection from signals with combinations of overshoot and low quality that are acceptable to the ideal reference receiver for TDECQ with its infinite resolution and perfect linearity, but real receivers designed to realistic cost and power objectives struggle with.
PAM4 receiver ICs are likely to have been designed and qualified to 200GBASE-DR4, 200GBASE-FR4, 200GBASE-LR4, 200GBASE-ER4, 50GBASE-FR, 50GBASE-LR and/or 50GBASE-ER and 100GBASE-DR which all protect the receiver from bad over-emphasised signals with a limit on K = 10log10(Ceq). Also 50GBASE-SR, 100GBASE-SR2, 200GBASE-SR4, 400GBASE-SR8 and 400GBASE-SR4.2. Recent 100 Gb/s/lane PAM4 receivers (100GBASE-DR, 100GBASE-FR1, and 100GBASE-LR1, 400GBASE-FR4 and 400GBASE-LR4-6) are protected by over/under-shoot and transmitter power excursion limits.
In my previous comment I meant to recommend all three limits because each one can catch undesirable signals that the others miss, and that TDECQ misses too.
There are no separate measurements for these; they are by-products of waveform captures for TDECQ and TECQ.

SuggestedRemedy

Reinstate the limit on K = 10log10(Ceq) for all three PMDs.
Then at least there will be consistent protection across the 50Gb/s/lane family.
Add over/under-shoot limits as in the latest P802.3cu draft, for all three PMDs.
Add transmitter power excursion limits to the PMD(s) that need that protection (it depends on the receive max power).

Response *Response Status* **U**

REJECT.
This repeats D2.2 Comment#14. No rationale is given to change previous resolution.