Cl **45** *SC* **45.2.1.20** *P* **24** *L* **29** # i-1

Healey, Adam

Comment Type **T** *Comment Status* **A**

Implement the proposed revision text in Maintenance Request 1342 <http://www.ieee802.org/3/maint/requests/maint_1342.pdf>. The proposed revision text is:
"Allocate the following MDIO bits:
1.26.9 for 100GBASE-SR2 ability
1.26.8 for 100GBASE-CR2 ability
1.26.7 for 100GBASE-KR2 ability
1.26.3 for 100GBASE-DR ability
1.23.2 for 200GBASE-SR4 ability
1.23.1 for 200GBASE-CR4 ability
1.23.0 for 200GBASE-KR4 ability"

SuggestedRemedy

Allocate MDIO bits as described in the comment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Allocate the following MDIO bits:
1.26.9 for 100GBASE-SR2 ability
1.26.8 for 100GBASE-CR2 ability
1.26.7 for 100GBASE-KR2 ability
1.26.3 for 100GBASE-DR ability
1.23.2 for 200GBASE-SR4 ability
1.23.1 for 200GBASE-CR4 ability
1.23.0 for 200GBASE-KR4 ability
with editorial license.

Cl **45** *SC* **45.2.1.20** *P* **24** *L* **39** # i-2

Marris, Arthur Cadence Design Systems, Inc.

Comment Type **T** *Comment Status* **A**

Some 200G ability bits are missing from this register

SuggestedRemedy

Implement maintenance request:
http://www.ieee802.org/3/maint/requests/maint_1342.pdf

so the register "200G PMA/PMD extended ability register (Register 1.23)" is modified and the register "40G/100G PMA/PMD extended ability 2 (Register 1.26)" is created

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment i-1

Cl **FM** *SC* **FM** *P* **12** *L* **54** # i-3

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **R**

Missing period at end of sentence

SuggestedRemedy

Add a period.

Response *Response Status* **C**

REJECT.
This comment has been overtaken by events. This text has been removed by comment i-12 because the assumed amendment order has changed.

Cl **122** *SC* **122.1** *P* **38** *L* **38** # i-4

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *Bucket*

The two lists of options for PMDs in Figure 122-1 have three items each. In such lists, it is uncommon to have more than one instance of "or".

For the conjunction "and" there is a long precedence of using only one instance in such lists.

SuggestedRemedy

Change "200GBASE-FR4, or 200GBASE-LR4, or 200GBASE-ER4" to "200GBASE-FR4, 200GBASE-LR4, or 200GBASE-ER4".

Change "400GBASE-FR8, or 400GBASE-LR8, or 400GBASE-ER8" to "400GBASE-FR8, 400GBASE-LR8, or 400GBASE-ER8".

Response *Response Status* **C**

ACCEPT.

Cl **122** *SC* **122.6** *P* **41** *L* **40** # i-5

Ran, Adee Intel Corporation

Comment Type **E** *Comment Status* **A** *Bucket*

Missing serial comma after "400GBASE-LR8".

SuggestedRemedy

Add a comma.

Response *Response Status* **C**

ACCEPT.

Cl **122** *SC* **122** *P* *L* # i-6

Ran, Adee

Intel Corporation

Comment Type **E** *Comment Status* **R** *Bucket*

Clause 122 now defines six PMDs. In many cases, the names of all six are listed in the text where it refers to all PMDs as a group. This makes the text harder to read (and maintain) than is necessary.

In cases where all PMDs are referred to as one group, using the generic term "PMD" rather than listing all names should be sufficient. It will also help highlight the cases where specifications are not the same for all PMDs.

A similar approach has been used in 802.3cd clauses 136 and 137, which defined several similar PMDs per clause. Text in the spirit of the last paragraph of 136.2 may be used to make the term "PMD" explicitly refer to all PMDs.

Examples I found:
- Table 122-1 title
- Figure 122-1 title
- 122.2 first paragraph
- 122.5
- Figure 122-2 title
- 122.7 subclause heading and content
- Table 122-8 title
- 122.7.1, 122.7.2 subclause headings
- 122.7.3 subclause heading and text
- Table 122-13 title
- 122.9.4 and 122.9.5 text
- 122.11 text
- 122.11.3 text

To a lesser extent this also applies to clauses 138 and 139 which now define three PMDs each.

SuggestedRemedy

Change all instances of "200GBASE-FR4, 200GBASE-LR4, 200GBASE-ER4, 400GBASE-FR8, and 400GBASE-LR8, and 400GBASE-ER8 PMDs" (and similar lists) to "PMD", or similar shorter text as necessary (use editorial license).

Consider applying in clauses 138 and 139 as well.

Response *Response Status* **C**

REJECT.
The existing text avoids ambiguity by listing the applicable PMDs. Clause 136 is not very different in this respect in that it contains 14 instances of "50GBASE-CR, 100GBASE-CR2, and 200GBASE-CR4".

Cl **122** *SC* **122.7** *P* **42** *L* **47** # i-7

Ran, Adee

Intel Corporation

Comment Type **E** *Comment Status* **A** *Bucket*

The text here specifies (conditional) interoperation between:

- 200GBASE-ER4 and 200GBASE-LR4
- 400GBASE-LR8 and 400GBASE-FR8
- 400GBASE-ER8 and 400GBASE-FR8
- 400GBASE-ER8 and 400GBASE-LR8

But there are no similar requirements for interoperation between:
- 200GBASE-LR4 and 200GBASE-FR4
- 200GBASE-ER4 and 200GBASE-FR4

This is obviously intentional, since 200GBASE-FR4 has different wavelength specifications than the other two 200G PMDs.

However, it is quite difficult to read and understand which PMDs interoperate and which don't, since the text runs across the paragraph.

SuggestedRemedy

Separate the text starting from line 47 to the end of this paragraph to four new and separate paragraphs.

Consider adding a NOTE to clarify that 200GBASE-FR4 does not interoperate with either 200GBASE-LR4 or 200GBASE-ER4.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Separate the text starting from "The 200GBASE-ER4 PMD interoperates" to the end of this paragraph to four new and separate paragraphs.
Make the equivalent change in 139.6.
IEEE drafts do not usually contain text describing which PMDs do not interoperate.

Cl **138** *SC* **138.8.5** *P* **70** *L* **11** # i-8

Ran, Adee
Intel Corporation

Comment Type **E** *Comment Status* **R** *Bucket*

The editorial instruction says "delete... as follows:" and then lists the text to be deleted.

While this conforms to the style manual, it may be confusing for readers of this amendment before it is incorporated into a revision, since the text is not marked as deleted. It may be understood as if this item is still valid.

In comparison, the editorial instruction in 139.7.5.3 shows the similar text as deleted.

Similarly in 138.8.10, 140.7.5, 140.7.10.

SuggestedRemedy

Use the "change" editorial instruction, and include the whole list of exceptions, marking the deleted one in strikethrough.

Similarly in the other subclauses mentioned in the comment.

Response *Response Status* **C**

REJECT.
"Delete" is a valid editing instruction and, as noted in the comment, this is in accordance with the IEEE-SA Standards Style Manual. The draft is clear that the quoted text is to be deleted.

Cl **122** *SC* **122.11a** *P* **58** *L* **37** # i-9

Ran, Adee
Intel Corporation

Comment Type **E** *Comment Status* **R** *Bucket*

This draft adds three very short first-level subclauses to clause 122 (which will eventually become 122.12, 122.13, and 122.14). These subclauses deal with a common matter of interoperability.

For a better structure, these subclauses can be merged to a single first-level subclause 122a "Requirements for interoperation", with three second-level subclauses 122a.1, 122a.2, and 122a.3 (to enable separate cross-references).

Similarly in clause 139, 139.10a and 139.10b would better be 139.10a.1, and 139.10a.2.

SuggestedRemedy

Change subclause hierarchy per the comment.

Response *Response Status* **C**

REJECT.
The requirements for interoperation between the 400GBASE-LR8 PMD and the 400GBASE-FR8 PMD are noted in 122.7. Consequently, these subclauses do not contain all of the requirements for interoperation and therefore a subclause heading of "Requirements for interoperation" would be misleading.

Cl **122** *SC* **122.8.8** *P* **53** *L* **8** # i-10

Anslow, Peter
Ciena

Comment Type **E** *Comment Status* **A** *Bucket*

Inserted Equation (122-3) should be numbered Equation (122-2a)

SuggestedRemedy

Renumber inserted Equation (122-3) to be Equation (122-2a)

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **21** *L* **13** # i-11

Anslow, Peter
Ciena

Comment Type **E** *Comment Status* **A** *Bucket*

50GBASE-LR was inserted by IEEE Std 802.3cd-2018

SuggestedRemedy

In the editing instruction, change "after 50GBASE-LR as follows:" to "after 50GBASE-LR (as inserted by IEEE Std 802.3cd-2018) as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **00** *P* *L* # i-12

Anslow, Peter
Ciena

Comment Type **E** *Comment Status* **A**

The IEEE 802.3 chair has announced the expected order of amendments to be such that the P802.3cn draft will be Amendment 4 to IEEE Std 802.3-2018

SuggestedRemedy

Change the draft to be Amendment 4 and remove the changes due to P802.3cg, P802.3cq, and P802.3cm that were previously assumed to be ahead of this draft.

Response *Response Status* **C**

ACCEPT.

Cl **121** *SC* **121.8.5.1** *P* **33** *L* **18** # i-13

Rannow, R K — IEEE/SELF

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

"Bessel-Thomson response" is used in multiple instances in the proposed standard.
Data describing the response as measurements may be greatly influenced by SFDR and ENOB (> 2.3 dB)
Could 2.3 dB impact the performance sufficiently?

SuggestedRemedy

Suggest details on the measurement solution.

Response *Response Status* **U**

REJECT.
The commenter has not demonstrated that there is an issue with the TDECQ definition or proposed a change to the draft that removes that issue. The changes being made to 121.8.5.1 follow the changes that were made to the TDECQ definition in the in-force amendment IEEE Std 802.3cd-2018 in 138.8.5 and 139.7.5.1.

Cl **116** *SC* **116.1.4** *P* **28** *L* **32** # i-14

Kabra, Lokesh — Synopsys, Inc

Comment Type **E** *Comment Status* **R**

The updation done in Table 116-4 by IEEE 802.3cm specifications is not reflected in this document. As 802.3cm precedes 802.3cn, this missing entries can create confusion.

SuggestedRemedy

Include the rows added by 802.3cm in Table 116-4 for 400GBASE-SR8 and 400GBASESR4.2 PHY types.

Response *Response Status* **C**

REJECT.
This comment has been overtaken by events. The assumed order of amendments to IEEE Std 802.3-2018 has been changed by the IEEE 802.3 WG Chair so that IEEE Std 802.3cm-20xx is no longer assumed to be before this draft (see comment i-12). These changes therefore no longer need to be made.

Cl **116** *SC* **116.1.2** *P* **27** *L* **11** # i-15

Kabra, Lokesh — Synopsys, Inc

Comment Type **E** *Comment Status* **R**

Item g does include the changes done in IEEE 802.3cm draft. As 802.3cm precedes 802.3cn, those changes should be reflected here.

SuggestedRemedy

Modify the instructions in line 9 to

Change items g) in 116.1.2 (as modified by IEEE Std 802.3cm-20xx) and item h) in 116.1.2 (as modified by IEEE STd 802.3cd-2018) as follows :

g) The MDIs as specified in Clause 122 for 400GBASE-FR8, 400GBASE-LR8 and 400GBASE-ER8, in Clause 138 for 400GBASE-SR8, and in Clause 150 for 400GBASE-SR4.2, all use an 8-lane data path.

Response *Response Status* **C**

REJECT.
This comment has been overtaken by events. The assumed order of amendments to IEEE Std 802.3-2018 has been changed by the IEEE 802.3 WG Chair so that IEEE Std 802.3cm-20xx is no longer assumed to be before this draft (see comment i-12). These changes therefore no longer need to be made.

Cl **122** *SC* **122.7** *P* **42** *L* **47** # i-16

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

This paragraph discusses two different topics and has become too long.

SuggestedRemedy

Split it into separate paragraphs, one for each interop pair.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment i-7.

[Editor's note added after comment resolution completed. The response to comment i-7 is:
Separate the text starting from "The 200GBASE-ER4 PMD interoperates" to the end of this paragraph to four new and separate paragraphs.
Make the equivalent change in 139.6.
IEEE drafts do not usually contain text describing which PMDs do not interoperate.
]

Cl **139** *SC* **139.6** *P* **74** *L* **47** # i-17

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

This paragraph discusses two different topics. As the first part is boilerplate, the second could easily be overlooked.

SuggestedRemedy

Split it into separate paragraphs, one for each interop pair.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment i-7.

[Editor's note added after comment resolution completed. The response to comment i-7 is:
Separate the text starting from "The 200GBASE-ER4 PMD interoperates" to the end of this paragraph to four new and separate paragraphs.
Make the equivalent change in 139.6.
IEEE drafts do not usually contain text describing which PMDs do not interoperate.
]

Cl **122** *SC* **122.7** *P* **42** *L* **49** # i-18

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

This says "provided that the channel requirements ... are met" four times, but what those requirements are could be clearer. Both 122.10, Fiber optic cabling model, and 122.11, Characteristics of the fiber optic cabling (channel), should apply.
See a related comment against 122.11a.

SuggestedRemedy

Please add cross-references. To avoid repetition, insert a sentence after "2 m to 2 km).": "Channel characteristics and requirements are given in 122.10 and 122.11." Similarly in 139.6.

Response *Response Status* **C**

REJECT.
Only one sentence says "provided that the channel requirements for 400GBASE-FR8 are met" and that sentence is part of the base text discussing interoperation between two PMDs that are not within the scope of this project.

The other three sentences are of the form "provided that the channel requirements defined in 122.11x are met". These all already contain an explicit cross-reference for where to find the information.

Cl **122** *SC* **122.11a** *P* **58** *L* **41** # i-19

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A**

122.7 and 122.11a together, calling out 122.10 but not other subclauses, can be read as excluding the discrete reflectance rules in 122.11.2.2 for mixed-PMD cases, which I don't think is intended.
See a related comment against 122.7.

SuggestedRemedy

In 122.11a, "interoperate with each other (over an engineered link) provided that the fiber optic cabling (channel) characteristics for 200GBASE-LR4 given in 122.10 are met, with the exception ...",
delete "given in 122.10".
Similarly for 122.11b, 122.11c, 139.10a, 139.10b.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Delete "given in 122.10" in 122.11a, 122.11b, and 122.11c.
Delete "given in 139.9" in 139.10a and 139.10b.

Cl **121** *SC* **121.8.5.3** *P* **33** *L* **25** # i-20

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A**

To complete the changes in this draft we need to modify the paragraph beginning "When the larger of SERL and SERR ..." mentioned here (page 135 of base spec).

SuggestedRemedy

Change "When the larger of SERL and SERR is equal to the target SER of 4.8 x 10-4, and the value of sigmaG cannot be increased by further optimization of the equalizer tap coefficients, then TDECQ is calculated."
to "When... further optimization of the equalizer tap coefficients *and the sub-eye threshold levels*, then TDECQ is calculated."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the editing instruction to:
"Insert a new paragraph in 121.8.5.3 before the paragraph beginning “When the larger of SERL and SERR ...” and also change that paragraph as follows:"
Bring the paragraph beginning “When the larger of SERL and SERR ...” into the draft and show "by further optimization of the equalizer tap coefficients," as changing to "by further optimization of the equalizer tap coefficients or the sub-eye threshold levels,"

Cl **122** *SC* **122.1** *P* **37** *L* **20** # i-21

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

:.

SuggestedRemedy

:

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
In the editing instruction for Table 122-1, change "follows:." to "follows:"

Cl **122** *SC* **122.1** *P* **37** *L* **23** # i-22

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

Would this table title look better if it used the full width of the page?

SuggestedRemedy

Response *Response Status* **C**

REJECT.
The table title frame is already the full width of the page.

Cl **122** *SC* **122.1** *P* **39** *L* **4** # i-23

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

400GBASE-FR8, 400GBASE-LR8, 400GBASE-ER8 PHYs

SuggestedRemedy

missing "and"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change:
"400GBASE-LR8, 400GBASE-ER8 PHYs" to:
"400GBASE-LR8, and 400GBASE-ER8 PHYs"
where "and " is in underline font.

Cl **121** *SC* **121.8.6a** *P* **33** *L* **51** # i-24

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A**

Readers struggle to understand "as measured through an O/E converter and oscilloscope with a combined 3 dB bandwidth of approximately 13.28125 GHz with a fourth-order Bessel-Thomson response to at least 1.5 x 26.5625 GHz and at frequencies above 1.5 x 26.5625 GHz the response should not exceed -24 dB". 5-line sentence is too long.
Similar issue in three other places.

SuggestedRemedy

Break it up:
"Transmitter transition time is defined as the slower of the time interval of the transition from 20% of OMAouter to 80% of OMAouter, or from 80% of OMAouter to 20% of OMAouter, for the rising and falling edges respectively, as measured through an O/E converter and oscilloscope with response defined as follows. The combined response of the O/E converter and oscilloscope has a 3 dB bandwidth of approximately 13.28125 GHz with a fourth-order Bessel-Thomson response to at least 1.5 x 26.5625 GHz. At frequencies above 1.5 x 26.5625 GHz the response should not exceed -24 dB.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
In 121.8.6a and 122.8.6a, change the text to:
"Transmitter transition time is defined as the slower of the time interval of the transition from 20% of OMAouter to 80% of OMAouter, or from 80% of OMAouter to 20% of OMAouter, for the rising and falling edges respectively, as measured through an O/E converter and oscilloscope with response defined as follows. The combined response of the O/E converter and oscilloscope has a 3 dB bandwidth of approximately 13.28125 GHz with a fourth-order Bessel-Thomson response to at least 1.5 x 26.5625 GHz. At frequencies above 1.5 x 26.5625 GHz the response should not exceed –24 dB."

In 124.8.6a, change the text to:
"Transmitter transition time is defined as the slower of the time interval of the transition from 20% of OMAouter to 80% of OMAouter, or from 80% of OMAouter to 20% of OMAouter, for the rising and falling edges respectively, as measured through an O/E converter and oscilloscope with response defined as follows. The combined response of the O/E converter and oscilloscope has a 3 dB bandwidth of approximately 26.5625 GHz with a fourth-order Bessel-Thomson response to at least 1.3 x 53.125 GHz. At frequencies above 1.3 x 53.125 GHz the response should not exceed –20 dB."

Cl **122** *SC* **122.6** *P* **41** *L* **40** # i-25

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A**

This says that the 400GBASE-ER8 center frequencies are spaced at 800 GHz, but L3 and L4 are 1600 GHz apart.

SuggestedRemedy

Change "spaced at 800 GHz" to "spaced on an 800 GHz grid".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "and are spaced at 800 GHz" to "and are spaced at multiples of 800 GHz" where "multiples of" is underlined.

Cl **122** *SC* **122.8.9.2** *P* **55** *L* **21** # i-26

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

"RINxx.xOMA" but x stands for a number, not a single digit. Compare clauses 52, 58, 68, 75. In Section 8 and 802.3cd, 122 and 139 have "RINxxOMA": different again, but only in the PICS.

SuggestedRemedy

RINxOMA

Response *Response Status* **C**

REJECT.
A straw poll was taken:
Do you support changing to RINxOMA?
Yes: 2
No: 3

As the reflection values in Clause 122 include 17.1 and 15.6, changing "RINxx.xOMA" to "RINxOMA" would reduce the clarity of the draft rather than enhance it.

Cl **122** *SC* **122.7.2** *P* **46** *L* **45** # i-27

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

OMAo-
uter
split over two lines

SuggestedRemedy

Please fix. Also in Table 122-12.

Response *Response Status* **C**

ACCEPT.

Cl **122** *SC* **122.11.1** *P* **57** *L* **27** # i-28

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

400GBASE-LR8 or 40 km

SuggestedRemedy

400GBASE-LR8, or 40 km (insert a comma)

Response *Response Status* **C**

ACCEPT.

Cl **139** *SC* **139.1** *P* **71** *L* **26** # i-29

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

50GBASE-FR,
50GBASE-LR
50GBASE-ER

SuggestedRemedy

Insert the other comma

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
In the heading row of Table 139-1, change "50GBASE-LR" to "50GBASE-LR,"

Cl **139** *SC* **139.7.5.3** *P* **78** *L* **44** # i-30

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

This says that TDECQ for 50GBASE-xR is as in 121.8.5.3 with one exception: the reference equalizer in 139.7.5.4. Yet with the changes in this draft, this reference equalizer is identical to the one in 121.8.5.4, referred to in 121.8.5.3. This is important and how it should be, to allow breakout.

SuggestedRemedy

Delete "with the exception that the reference equalizer is as specified in 139.7.5.4."
Delete 139.7.5.4 including Figure 139-5,TDECQ reference equalizer functional model.
If appropriate, in 121.8.5.4, change "for 200GBASE-DR4" to "for 50GBASE-FR, 50GBASE-LR, and 200GBASE-DR4"

Response *Response Status* **C**

REJECT.
This exception and the local specification for the reference equalizer is as per the base standard and matches the way that the TDECQ equalizer has been specified in all of the clauses that use TDECQ except Clause 124.

Cl **121** *SC* **121.8.8** *P* **34** *L* **32** # i-31

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

Not the usual font for figures

SuggestedRemedy

Change the serif font to Arial. Also figs 122-6, 122-7 and 139-6.

Response *Response Status* **C**

REJECT.
The font used is compliant with the IEEE-SA Standards Style Manual, which says "Times New Roman and Arial fonts are preferred." for fonts in graphics.
The font used matches that in Figures 121-7, 122-6, 122-7, 124-4 in the published version of IEEE Std 802.3-2018 and Figures 138-4, 139-6, 140-5 in the published version of IEEE Std 802.3cd-2018.

Cl **139** *SC* **139.7.9** *P* **80** *L* **6** # i-32

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

The diagonal lines are at a gradient of 1:1 but this is obscured more than it need be by the choice of scales.

SuggestedRemedy

Change the y axis range from -18 to 0, to -16 to -5.

Response *Response Status* **C**

REJECT.
The purpose of Figure 139-6 is to illustrate the limiting values (that are defined very precisely by Equations 139-1, 139-2 and 139-3) of the informative parameter "Receiver sensitivity" for the three PMDs.
Changing the vertical axis to be from -16 dBm to -5 dBm would still be an 11 dB range, the gradient of the sloping lines would still not be obvious from the graph, and there would be little room for the annotation. The slope is, however, obvious from the three equations.

Cl **139** *SC* **139.9** *P* **81** *L* **12** # i-33

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **A** *Bucket*

Channel insertion lossa,
b(max)
split over two lines

SuggestedRemedy

Make the first column wider, reducing second and third columns. Insert space between b and (

Response *Response Status* **C**

ACCEPT.

Cl **121** *SC* **121.8.8** *P* **34** *L* **19** # i-34

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

The diagonal lines are at a gradient of 1:1 but this is obscured by the choice of scales.

SuggestedRemedy

Change the y axis max from 0 to -4.

Response *Response Status* **C**

REJECT.
The purpose of Figure 121-7 is to illustrate the limiting value (that is defined very precisely by Equation 121-13) of the informative parameter "Receiver sensitivity" for the 200GBASE-DR4 PMD.
The axes of the graph are the same as those in the base standard. The only change made in this draft is to change the highest value of SECQ plotted from 3.4 dB to 3.2 dB. The slope of the line is better determined by reference to Equation 121-13 than by looking at the slope in the illustration.

Cl **122** *SC* **122.8.8** *P* **53** *L* **21** # i-35

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

The diagonal lines are at a gradient of 1:1 but this is obscured more than it need be by the choice of scales.

SuggestedRemedy

Change the y axis range from -18 to 0, to -16 to -3.

Response *Response Status* **C**

REJECT.
The purpose of Figure 122-6 is to illustrate the limiting values (that are defined very precisely by Equations 122-1, 122-2 and 122-3) of the informative parameter "Receiver sensitivity" for the three PMDs.
Changing the vertical axis to be from -16 dBm to -3 dBm would still be a 13 dB range, the gradient of the sloping lines would still not be obvious from the graph, and there would be little room for the annotation. The slope is, however, obvious from the three equations.

Cl **122** *SC* **122.8.8** *P* **54** *L* **23** # i-36

Dawe, Piers J G — Mellanox Technologies

Comment Type **E** *Comment Status* **R** *Bucket*

The diagonal lines are at a gradient of 1:1 but this is obscured more than it need be by the choice of scales.

SuggestedRemedy

Change the y axis range from -18 to 0, to -17 to -3.

Response *Response Status* **C**

REJECT.
The purpose of Figure 122-7 is to illustrate the limiting values (that are defined very precisely by Equations 122-4, 122-5 and 122-6) of the informative parameter "Receiver sensitivity" for the three PMDs.
Changing the vertical axis to be from -17 dBm to -3 dBm would still be a 14 dB range, the gradient of the sloping lines would still not be obvious from the graph, and there would be little room for the annotation. The slope is, however, obvious from the three equations.

Cl **122** *SC* **122.7.1** *P* **45** *L* **43** # i-37

Dawe, Piers J G — Mellanox Technologies

Comment Type **T** *Comment Status* **R**

The TDECQ limit for 400GBASE-ER8, 3.4 dB, is higher than any other SMF 50G/lane TDECQ limit. A low chirp transmitter could take advantage of this and present the receiver with a slower signal than it had been designed for (if the TIA was designed for FRn and LRn, and one makes an ERn receiver by replacing a pin with an APD). We introduced the transition time spec to catch this sort of thing but unfortunately, it appears to be too loose.

SuggestedRemedy

Reduce the transition time limit, (to 30 or 32 ps TBD), or introduce a maximum cursor tap limit. The limit should be checked with a commercial simulator. It should be applied to all SMF 50G/lane PMDs but could be applied to 400GBASE-ER8 alone.

Response *Response Status* **C**

REJECT.
The presentation in http://www.ieee802.org/3/cn/public/tf_interim/19_0820/dawe_3cn_01_190820.pdf was reviewed.
The transmitter transition time limit was introduced to limit how slow the transmitter could be. The limit for 400GBASE-ER8 is the same as for the other 50G/lane PMDs.
Consequently, this issue could only arise for a receiver that was designed to rely on the dispersion penalty for the 2 km or 10 km transmitters preventing them from being as slow as the limit and then the dispersion penalty for a 40 km transmitter being significantly lower, allowing the transmitter to be slower. This would be a poor receiver design strategy and is not a sufficiently realistic scenario to justify tightening the transmitter transition time limit for this PMD.
The commenter has not provided sufficient evidence to demonstrate that the transmitter transition time is too loose or proposed a specific change to the draft that has been shown to remove that issue.