Cl **56** *SC* **56.1.3** *P* **29** *L* **46** # R1-1

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Notes to tables are informative, thus "may" (normative language) is incorrect in this note.

SuggestedRemedy

Change "may vary" to "varies" in all 5 places it appears in notes to table 56-1

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Table 56-1 and the table notes are from the base standard and “may” is frequently used in table notes, such as Table 58-9, Table 59-10, Table 75-1 in the base standard.

Cl **135** *SC* **135.5.7.2** *P* **50** *L* **24** # R1-2

Rolfe, Benjamin — Blind Creek Associates

Comment Type **E** *Comment Status* **D**

"may optionally" is redundant. "may" defines an optional behavior. Somehere there is a shortatge of words that begs for an "optionally" but this isn't that place.

SuggestedRemedy

delete "optionally"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See the response to comment #R1-26.

Cl **168** *SC* **168.11.4.1** *P* **83** *L* **16** # R1-3

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Not at all sure what this means as part of the PICS pro-forma (other notes in this column seem to be success criteria). It is incorrect use of "may" (may" is normative). If this is stating expected results then it has no meaning (this point may or may not be made available...??)

SuggestedRemedy

change "may" to "is"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The expression of "This point may be made available for use by implementers to certify component conformance." has been frequently used in PICS clauses, such as CL139.13.3 and CL140.12.3.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.11.3** *P* **82** *L* **27** # R1-4

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Incorrect use of "may" as "may or may not" doesn't really make sense here.

SuggestedRemedy

change "may" to "is"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The expression of "This point may be made available for use by implementers to certify component conformance." has been frequently used in PICS clauses, such as CL139.13.3 and CL140.12.3.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.11.3** *P* **82** *L* **22** # R1-5

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Incorrect use of "may" as "may or may not" doesn't really make sense here.

SuggestedRemedy

change "may" to "is"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The expression of "This point may be made available for use by implementers to certify component conformance." has been frequently used in PICS clauses, such as CL139.13.3 and CL140.12.3.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.11.2.1** *P* **82** *L* **28** # R1-6

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

The current scope of the standard does not include human behavior, including that of the humans who implement this standard. Thus "shall complete" is out of scope of this standard.

SuggestedRemedy

Amend the PAR to change to scope of this standard to include any and all persons who may consider implementing any part of this standard. Alternately, change "shall complete" to "completes".

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The expression of "shall complete" could not be found in CL168.11.2.1.

Cl **168** *SC* **168.10.1** *P* **79** *L* **44** # R1-7

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Notes to tables are informative, thus "may" (normative language) is incorrect in this note (note (b). "may not" is always wrong (that's a clue too).

SuggestedRemedy

change "may not support" to "might not support".

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL16.4:
A table footnote always contains normative information.

The same expression has been frequently used in existing clauses, such as CL52.14.3 and CL87.11.1.
IEEE P802.3dk needs to be consistent with existing clauses.

Cl **168** *SC* **168.8.2** *P* **77** *L* **53** # R1-8

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Incorrect use of normative language in a footnote: "A host system that fails to meet the manufacturer's requirements and/or usage restrictions may emit laser radiation in excess of the safety limits of one or more safety standards.". This is wrong for at least two reasons. Footnotes are informative. I doubt we mean to say it is permisiable to emit laser radiation in excess of saftey limits.

SuggestedRemedy

Change to:
If a host system fails to meet the manufacturer's requirements and/or usage restrictions, it is posible that the sysetm emits laser radiation in excess of the safety limits of one or more safety standards. In such a case, the host manufacturer is required to obtain its own laser safety certification.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The same expression could be found in existing clauses, such as CL140 and CL167.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.8.2** *P* **77** *L* **23** # R1-9

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Unless we specify which laser safety standars are premisible to meet the requirements of this standard, this is an incomplete and impossible to verify requirement. Or just an erroneous use of may when the real point is to state a fact.

SuggestedRemedy

change "may" to "might" or "is usually"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted to)."

The same expression could be found in existing clauses, such as CL140 and CL167.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.7.5.1** *P* **72** *L* **23** # R1-10

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Notes to tables are informative and so shall not contain normative language. The statement "Thelink may be as short as 2 m" suggests a statement of possibility (fact).

SuggestedRemedy

Change "The link may be" to "It is possible that the link is"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL16.4:
A table footnote always contains normative information.

The same expression could be found in existing clauses, such as CL140 and CL167.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.5.1** *P* **63** *L* **50** # R1-11

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

"may be useful to implementers" seems like a statement of fact rather than an optional requirement.

SuggestedRemedy

change "may be useful" to "are useful"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change the last sentence in 168.5.1 as:
TP1 and TP4 are optional reference points that may be useful to implementers for testing components (these test points are not typically accessible in an implemented system).

Cl **168** *SC* **168.4** *P* **62** *L* **39** # R1-12

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

The "may provide" makes no sense. Why would the standard define variables that may not provide some sort of useful thing? Presumabley the point for including them is to provide control and status information.Otherwise why bother?

SuggestedRemedy

Change to: The optional MDIO capability described in Clause 45 defines several variables that provide control and status information for and about the PMD.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted to)."

The same expression could be found in existing clauses, such as CL138, CL139, and CL140.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.1.1** *P* **61** *L* **10** # R1-13

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

" the frame loss ratio may be degraded to
6.2 × 10–10 for 64-octet frames with minimum interpacket gap due to additional errors from the electrical interfaces."
This suggests it is permisable to exceed this frame loss but only when the errors are from the electrical interfaces? How exactly is that measured? Seems a dodgy requirement statement. So perhaps this is a statement of fact. But what fact is less than clear.

SuggestedRemedy

Change to: For a complete Physical Layer, even when this frame error rate requirement is met, the total frame loss ratio can be degraded to 6.2 × 10–10 for 64-octet frames with minimum interpacket gap due to additional errors from the electrical interfaces.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted to)."
"the frame loss ratio may be degraded to
6.2 × 10–10 for 64-octet frames" in CL168.1.1 means "the frame loss ratio is permitted to be degraded to 6.2 × 10–10 for 64-octet frames".
The same expression could be found in existing clauses, such as CL140.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.1** *P* **59** *L* **17** # R1-14

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

"the management functions that may be accessible" seems like a dodgy use of "may" (normative langauge). I think the intended meaning is that hwen such fuctions are available they are accessible (which seems like restating the obvous). The "or equivalent" would make this an incomplete requirement anyway, so figuring that wasn't intended either.

SuggestedRemedy

Change to:
When forming a complete Physical Layer, a PMD shall be connected to the appropriate PMA as shown in Table 168–1, and to the medium through the MDI. Optionally, management functions may be be accessible through the management interface defined in Clause 45, or equivalent.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word may is used to indicate a course of action permissible within the limits of the standard (may equals is permitted to)."
"the management functions that may be accessible" in CL168.1 means "the management functions that is permitted to be accessible".
The same expression is frequently used in PMC clauses, such as CL140.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **157** *SC* **157.2.4** *P* **55** *L* **47** # R1-15

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

"The PMA also may provide an observable electrical interface for the 25GAUI, or50GAUI, or 100GAUI chip-to-chip (C2C) or chip-to-module (C2M)." is either incomplete or not meant to be a statement of requirement.

SuggestedRemedy

Perhaps: "The PMA optionally provides an observable electrical interface for the 25GAUI, or50GAUI, or 100GAUI chip-to-chip (C2C) or chip-to-module (C2M)."

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The existing sentence is complete and specifies the PMA sublayer for 25GAUI, 50GAUI and 100GAUI C2C or C2M.
Similar description could be found in CL105.3.4 in the base standard.

Cl **135** *SC* **135.5.7.2** *P* **50** *L* **24** # R1-16

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

"The PMA may optionally provide 1/(1+D) mod 4
decoding capability on each input lane. A PMA shall provide 1/(1+D) mod 4 precoding capability on each output lane, except a PMA that is connected to the service interface of a 100GBASE-BRx PMD which may
provide such a capability." actually states that any PMA connected to a 100GBASE-BRx PMD is permitted even when that 100GBASE-BRx PMD does NOT provide such a capability. 'may' is equivalent to 'may or may not'. Not completelyh sure what is intended but failry sure not what is written when we parse the normative language.

SuggestedRemedy

Try this: The PMA may provide 1/(1+D) mod 4 decoding capability on each input lane. A PMA shall provide 1/(1+D) mod 4 precoding capability on each output lane, except when a PMA is connected to the service interface of a 100GBASE-BRx PMD which
provides such a capability.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See the response to comment #R1-26.

Cl **135** *SC* **135.5.7.2** *P* **50** *L* **24** # R1-17

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

"may optionally" is redundant, as "may" defines an optional behaivor.

SuggestedRemedy

Save the "optionally" for someplace it is actually needed by changing the sentence to:
The PMA may provide 1/(1+D) mod 4 decoding capability on each input lane. A PMA shall provide 1/(1+D) mod 4 precoding capability on each output lane, except when a PMA is connected to the service interface of a 100GBASE-BRx PMD which
provides such a capability.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See the response to comment #R1-26.

Cl **168** *SC* **168.5.4** *P* **64** *L* **37** # R1-18

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Not completely sure what this means: "SIGNAL_DETECT shall be a global indicator of the presence of the optical signal" but I think this is a simple statement of consequence when the requirement conditions in Table 168-4 are met.

SuggestedRemedy

Change "shall be" to "is".

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word shall indicates mandatory requirements strictly to be followed in order to conform to the standard and from which no deviation is permitted (shall equals is required to)."
The same expression could be found in existing clauses, such as CL140 and CL167.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.6.2** *P* **68** *L* **14** # R1-19

Rolfe, Benjamin Blind Creek Associates

Comment Type **T** *Comment Status* **D**

Notes to tables are informative. I'm pretty sure the SDG intends this statement to be a requirement. To achieve this it needs to be stated in normative text, not a note to a table..

SuggestedRemedy

Move to text prior to the table and change to: The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having the power level specified as Damage threshold in Tble 168-7.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL16.4:
A table footnote always contains normative information.
The same expression could be found in existing clauses, such as CL140 and CL167.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.8.4** *P* **77** *L* **38** # R1-20

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

"Normative specifications in this clause shall be met by a system integrating a 100GBASE-BRx PMD over the life of the product while the product operates within the manufacturer's range of environmental, power, and other specifications.' seems impossible to verify without killing the product. The SDG should not be requiring death and destruction.

SuggestedRemedy

Change to: It is expected that the normative specifications in this clause are met by a system integrating a 100GBASE-BRx PMD over
the life of the product when the product operates within the manufacturer's range of environmental, power, and other specifications.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word shall indicates mandatory requirements strictly to be followed in order to conform to the standard and from which no deviation is permitted (shall equals is required to)."

"Normative specifications in this clause shall be met by a system integrating a 100GBASE-BRx PMD over the life of the product while the product operates within the manufacturer's range of environmental, power, and other specifications." means "Normative specifications in this clause is required to be met by a system integrating a 100GBASE-BRx PMD over the life of the product while the product operates within the manufacturer's range of environmental, power, and other specifications."

The same expression could be found in existing clauses, such as CL140 and CL167.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.8.5** *P* **78** *L* **3** # R1-21

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

This statement, "A system integrating a 100GBASE-BRx PMD shall comply with applicable local and national codes for the
limitation of electromagnetic interference." is incomplete without normative references to the specific codes and most likely out of scope as it seems to suggest regulatory compliance requirements (which are out of scope of the SDG).

SuggestedRemedy

Change to: It is the responsibility of the implementer to assure that a system integrating a 100GBASE-BRx PMD complies with applicable local and national codes for the limitation of electromagnetic interference.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
According to the style manual CL9:
"The word shall indicates mandatory requirements strictly to be followed in order to conform to the standard and from which no deviation is permitted (shall equals is required to)."

The same expression could be found in existing clauses, such as CL140 and CL167.
IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.11.1** *P* **81** *L* **9** # R1-22

Rolfe, Benjamin — Blind Creek Associates

Comment Type **T** *Comment Status* **D**

The actions of the supplier (a human or entity comprised of humans) is out of scope of this standard.

SuggestedRemedy

Change "shall complete" to "completes"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The expression of "shall complete" has been frequently used in PICS clauses, such as CL140 and CL167.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl **168** *SC* **168.1** *P* **60** *L* **17** # R1-23

Ran, Adee — Cisco Systems, Inc.

Comment Type **T** *Comment Status* **D**

Table 168-1 has footnote e which states that precoding is optional. This is the only mention of precoding in this clause, and it does not even point to the specific subclause (135.5.7.2). The uninitiated reader may not know what it is and what are the requirements for its operation.

In fact, precoding needs to be set the same way in both sides of a link (either both transmitter and receiver use precoding, or both don't). But this is not stated.

In verbal discussions during working group review, it was stated that BRx links are assumed to be managed by service providers who will set the equipment on both sides correctly. But this assumption is not stated either.

The way precoding is used in the BRx environment is worth having a dedicated subclause.

SuggestedRemedy

Delete footnote a and instead add a new subclause (possibly 168.1.2) titled "Usage of precoding" with the following content (with editorial license):

In order to meet the requirements of 168.1.1, 100GBASE-BRx PHYs may use PAM4 precoding in the PMA, as specified in 135.5.7.2. Precoding support is optional in both PMA input and output.
Operation of a 100GBASE-BRx between two link partners requires that the precoder setting (enable or disable) is the same in the transmitter of one link partner and in the receiver of the other link partner. If both link partner support precoding, the criteria for using it and the means by which the PMAs on both link partners are configured are beyond the scope of the standard.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change footnote e as:
Precoding is optional in 100GBASE-BRx (see 136.5.7.2). When supported, its default state is disabled.

Cl **135** *SC* **135.5.7.2** *P* **50** *L* **10** # R1-24

Ran, Adee — Cisco Systems, Inc.

Comment Type **E** *Comment Status* **D**

The first paragraph of this subclause has been amended by 802.3ck-2022. The change is included in the text of the draft, but it is not mentioned that it is amended text. The editorial instruction should indicate that.

SuggestedRemedy

Change the editorial instruction to
"Change the first paragraph of 135.5.7.2 (as amended by IEEE Std 802.3ck-2022) as follows:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **135** *SC* **135.5.7.2** *P* **50** *L* **14** # R1-25

Ran, Adee — Cisco Systems, Inc.

Comment Type **E** *Comment Status* **D**

The new bulleted list and the paragraph preceding it do not form sensible sentences. The last item "are part of..." doesn't match the preceding text "to the service interface of".

SuggestedRemedy

A possible correction is:

1. Delete "connected to the service interface of" in the first paragraph, and change "that are" to "that are either:"
2. In the first and second list items, insert "connected to the service interface of" at the beginning.
3. In the third list item, delete "are".
Implement with editorial license.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change the first paragraph of 135.5.7.2 as:
The precoding specifications in this subclause apply to the input and output lanes of a PMA that are either
— connected to the service interface of a 100GBASE-BRx PMD, or
— connected to the service interface of a 50GBASE-R or 100GBASE-R PMD that includes the PMD control function defined in 136.8.11 (50GBASE-CR, 50GBASE-KR, 100GBASE-CR1, 100GBASE-CR2, 100GBASE-KR1, or 100GBASE-KR2), or
— part of a 50GAUI-1 C2C or 100GAUI-2 C2C link.
Implement with editorial license.

Cl **135** *SC* **135.5.7.2** *P* **50** *L* **23** # R1-26

Ran, Adee — Cisco Systems, Inc.

Comment Type **E** *Comment Status* **D**

The rewrite of the second paragraph makes it difficult to parse and to understand, even for PMAs not used for 100GBASE-BRx. Since this text will become part of the base standard in the next revision, this is not good service for readers.
The suggested remedy includes one way to make a more benign change. It may be done in other ways.

SuggestedRemedy

Change the text of the second paragraph as follows:
The PMA shall provide 1/(1+D) mod 4 decoding capability on each output lane, except a PMA that is connected to the service interface of a 100GBASE-BRx PMD, for which this capability is optional.
The PMA may provide 1/(1+D) mod 4 precoding capability on each input lane.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change the text of the second paragraph as follows:
The PMA shall provide 1/(1+D) mod 4 precoding capability on each output lane, except a PMA that is connected to the service interface of a 100GBASE-BRx PMD, for which this capability is optional.
The PMA may provide 1/(1+D) mod 4 decoding capability on each input lane.
Implement with editorial license.

Cl **168** *SC* **168.9** *P* **78** *L* **15** # R1-27

Maniloff, Eric — Ciena Corporation

Comment Type **T** *Comment Status* **D**

The wavelength for the Channel Insertion Loss needs to cover the full range of wavelengths from 1303.6 to 1310.1 nm

SuggestedRemedy

Update the Wavelength (nm) entry for Channel Insertion Loss in table 168-12 to "1303.6 to 1310.1"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **168** *SC* **168.10.1** *P* **79** *L* **11** # R1-28

Maniloff, Eric — Ciena Corporation

Comment Type **T** *Comment Status* **D**

Note a is unclear. 0.4dB/km is applied over the full wavelength range for 100GBASE-BR20 and 100GBASE-BR40 power budgets. 0.43 dB/km is applied over the full wavelength range for 100GBASE-BR10 power budget. The note implies that 0.4dB/km is only relevant at 1310 nm, and that 0.43 dB/km is only relevant at 1304.5 nm. In previous standards referencing losses to particular wavelengths these have been higher attenuations than used in the budget. It's unclear where in G.695 these specific attenuations are defined.

SuggestedRemedy

Clarify the notes related to attenuation. It may be sufficient to specify the 0.5dB/km for outside plant, with the actual channel losses defined by Table 168-12.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
0.43dB/km is from footnote a of Table 140-14.
Change footnote a as:
For the single-mode case, the 0.4 dB/km attenuation for optical fiber cables is defined in ITU-T G.652.
Add footnote b to the value of 0.43dB/km:
0.43 dB/km at 1304.5 nm attenuation for optical fiber cables are derived from Appendix I of ITU-T G.695.
Change footnote b to footnote c for the value of 0.5dB/km.
Implement with editorial license.

Cl **FM** *SC* **FM** *P* **1** *L* **26** # R1-29

Dawe, Piers J G — NVIDIA

Comment Type **E** *Comment Status* **D**

Missing "and"

SuggestedRemedy

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Add "and" before IEEE Std 802.3-2022/Cor 1-2024.

Cl **FM** *SC* **FM** *P* **1** *L* **28** # R1-30

Dawe, Piers J G NVIDIA

Comment Type **E** *Comment Status* **D**

D3.0 should have been D3.1.

SuggestedRemedy

D3.2

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change D3.0 to D3.2.

Cl **FM** *SC* **FM** *P* **9** *L* **3** # R1-31

Dawe, Piers J G NVIDIA

Comment Type **E** *Comment Status* **D**

The amendment number can (should?) appear here.

SuggestedRemedy

Change "Amendment: Bidirectional" to "Amendment 11: Bidirectional"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **0** *SC* **0** *P* *L* # R1-32

Dawe, Piers J G NVIDIA

Comment Type **E** *Comment Status* **D**

Changes vs. D3.0 should be in blue and red to distinguish them from changes vs. base spec.

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **Content** *SC* **Contents** *P* **13** *L* **3** # R1-33

Dawe, Piers J G NVIDIA

Comment Type **E** *Comment Status* **D**

There should be some white space between clause number and clause title

SuggestedRemedy

Fix the format in the template

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **56** *SC* **56.1.3** *P* **28** *L* **7** # R1-34

Dawe, Piers J G NVIDIA

Comment Type **T** *Comment Status* **D**

10GPASS-XR-D and 10GPASS-XR-U are P2MP not P2P (see Fig 100)

SuggestedRemedy

Move them to Table 56-1a

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **80** *SC* **80.1.4** *P* **36** *L* **34** # R1-35

Dawe, Piers J G NVIDIA

Comment Type **TR** *Comment Status* **D**

should be after 100GBASE-SR1 and before 100GBASE-DR, as in the 2022 base spec, because it is capable of 150 m, as stated in tables 86-2 and 13. The base spec was made like this by 802.3dc D3.0 comment I-54. The second (higher) reach had been added to P802.3ba by D2.0 comment 217.

SuggestedRemedy

Move it back to where it was, here and in Table 80-7a.
To avoid this confusion, it would be worth changing "100 m" to "150 m" or "100 m or 150 m depending on fiber type" here. In the definitions 1.4.39, 100 could simply be changed to 150; this would be similar to how we present copper PHYs and 100GBASE-ER4: we give an optimistic option (40 km not 30 km in that case).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Move 100GBASE-SR10 to after 100GBASE-SR1 and before 100GBASE-DR in Table 80-1a and 80-7a.
Change the description of 100GBASE-SR10 from "100 m" to "100 m or 150 m depending on fiber type" in Table 80-1a and 80-7a.

Cl **135** *SC* **135.6** *P* **50** *L* **41** # R1-36

Dawe, Piers J G NVIDIA

Comment Type **E** *Comment Status* **D**

A status variable name should not be split over two sub-rows.

SuggestedRemedy

Make the table full width. Make the fourth column wider and the second column a little narrower.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **168** *SC* **168.7.5** *P* **71** *L* **42** # R1-37

Dawe, Piers J G NVIDIA

Comment Type **TR** *Comment Status* **D**

The editor's note at line 27 says "tap weight limits will be added in alignment with IEEE P802.3 dj".

P802.3dj D3.1 Table 180-16 contains:
3dj latest : Pre-post equalizer coefficient difference limit: |w(1)/w(0) - b(1) - w(-1)/w(0)| < 0.25
where w(1) and -b(1), FFE and minus DFE first postcursor taps for the reference equaliser, do a similar job. b(1) cannot be negative. The 3dk spec has no DFE in its reference equaliser. The tap weights under discussion are to guard against signals that have been over-emphasised in the transmitter, so for 3dk's purposes we assume that b = 0.
ieee802.org/3/dj/public/25_05/chayeb_3dj_01_2505.pdf slide 8 shows that the problem is when FFE4, the first postcursor, is strongly positive (columns FIR1 to FIR6), which happens when the pulse response dips -ve after the main pulse. Typical RC and transmission line filters do not do this, so a transmitter implementer has to go out of his way to make a signal like this. However, a pulse response with a slower trailing edge than leading edge (equalised with more -ve post tap than pre tap) is natural and well tolerated by equalizers, as shown for example in chayeb_3dj_01_2505 slide 9.

ieee802.org/3/dj/public/adhoc/electrical/25_0605/ran_3dj_elec_01a_250605.pdf slides 12 to 18 graphed out and discussed chayeb_3dj_01_2505 slide 8, and proposed:
-0.3 <= w(-1)/w(0) <= 0.1 (the 3dj draft has -0.5 to 0.1), and
-0.3 <= w(1)/w(0) <= 0.1 (the 3dj draft has -0.6 to 0.2)
(However, chayeb_3dj_01_2505 slide 9 shows that a particular receiver can tolerate a signal with w(1) in particular much more negative than -0.3, although the transition time is out of spec.)
The associated comment 3dj D2.0 430 also said: Alternatively, specify that the difference between coefficients -1 and +1 of the reference receiver does not exceed +/-0.3.
3dj D2.0 433 proposed changing c(1) from 0.2 to to 0.1 and adding max c(1)-c(-1) <= 0.4.
(Tap weights were called c in 3dj before the DFE was added, now they are called w.)
A different remedy was adopted: abs(c(1)-c(-1)) < 0.25 only if c(1) > 0
but this was changed later, as above.

P802.3dk D3.0 comment 47 proposed: Add two specs:
Tap weight for the tap immediately after the largest tap: max 0.08. (Typically this tap would be -ve)
-0.3 <= (tap after - tap before) <= 0.15

As the taps sum to 1, one would not expect the main tap to be much more than 1 when the first postcursor, is strongly positive.
Chromatic dispersion might exacerbate the distortion; this should be mitigated by not over-emphasising the transmitted signal.

SuggestedRemedy

Add tap weight limits:
c(-1) max 0.1

c(1) max 0.1
Rationale: c(-1) and c(1) would naturally be -ve. The opposite is more troublesome for receivers. 0.1 is margin for tolerancing of transmitter peaking circuits and taps and additional distortion from chromatic dispersion, similar to the min main tap 0.8 but that assumes that c(-1) and c(1) are similar, not opposites.
and
c(1)-c(-1) max 0.15
Rationale: typical filters such as parasitics deliver signals with slower trailing edges than leading edges (causality), and receivers should be able to take advantage of that for efficient design. c(1) would naturally be more negative than c(-1), and its magnitude could be significantly larger. 0.15 is margin for tolerancing.

Proposed Response *Response Status* **W**

For group discussion.