Cl **157** *SC* **157.2** *P***21** *L***15** # 1

D'Ambrosia, John — Futurewei, U.S. Subsidiary of Huawei

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

As currently written, Note A only applies to the one cell where it is denoted, when in actuality it applies to all of the various cells in the clause columns
Also applies to Table 157-4, 157-5, and 157-6

SuggestedRemedy

Move the current location of Note A in table to next to "Clause."

Response *Response Status* **W**

ACCEPT.

Cl **168** *SC* **168.1** *P***27** *L***19** # 2

D'Ambrosia, John — Futurewei, U.S. Subsidiary of Huawei

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

The bottom of the "Physical Layer" is incorrect - it includes the MDI and should be drawn to the top of the "Medium"

SuggestedRemedy

27

Response *Response Status* **W**

ACCEPT.
Maintenance required for Figure 140-1 in Clause 140.

Cl **00** *SC* **0** *P***1** *L* # 28

Ran, Adee — Cisco Systems, Inc.

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

The project description refers to "a single strand of single-mode fiber". The word "strand" appears two more times in the draft, but is not defined in it. The base standard has only 3 instances of "strand", all related to copper wires, not optical fibers.
It is unclear what "strand" means.

SuggestedRemedy

Assuming "strand" means a single fiber, as it seems from the draft, I suggest changing "a single strand of single-mode fiber" to "one single-mode fiber", consistent with the text added in 30.5.1.1.2.
Implement across the draft (3 instances, and possbly other places as appropriate).

Response *Response Status* **W**

REJECT.
Strand is used in cp abstract and list of amendment.
All the abstracts will not be incorporated into the 802.3 base standard.
Keep consistent with 802.3cp.

Cl **45** *SC* **45.2.1.7.4** *P***13** *L***12** # 29

Ran, Adee — Cisco Systems, Inc.

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

Table 45-9 has been amended multiple times. The editorial instruction should state which version the amendment is based on.
Similarly for other tables in existing clauses (45 and 80).
I believe the current version of table 45-9 is in 802.3df-2024. Other tables may be in different amendments.
(P802.3da is also in flight but I assume P802.3dk is planned to be completed first)

The label in the suggested remedy is based on the label in 802.3df.

SuggestedRemedy

In the editorial instruction before Table 45-9, change the text to:
Insert a new row in Table 45–9 (as modified by IEEE Std 802.3db-2022, IEEE Std 802.3ck-2022, and IEEE 802.3df-2024) after the row for “100GBASE-LR4, 100GBASE-ER4”, as follows (some unchanged rows not shown):"
Change other instructions in clause 45 and clause 80 as appropriate.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **157** *SC* **157** *P***17** *L***1** # 30

Ran, Adee — Cisco Systems, Inc.

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

Missing editorial instruction for clause 157.
It seems that this amendment includes the whole clause with changes. But instructions should be given for specific changes, per the IEEE SA style manual.

Especially, changes to tables and the addition of a new figure 157-1a should be separate instructions. Tables that are not changed at all (such as table 157-3 through table 157-5) should not appear in the draft.

Previous amendments can be used as references.

SuggestedRemedy

Add editorial instructions to each subclause that is changed, as done in previous amendments.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #102.

Cl **168** *SC* **168** *P***26** *L***1** # 35

Ran, Adee Cisco Systems, Inc.

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

Missing editorial instruction for clause 168.

SuggestedRemedy

Add an editorial instruction: "Insert new clause 168".

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **168** *SC* **168.6.1** *P***33** *L***50** # 41

Ran, Adee Cisco Systems, Inc.

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

Footnote b of Table 167-7 refers to clause 139, but this clause is for a 50 Gb/s PMD and is irrelevant. The relevant clause may be 140 instead (assuming it is consistent; if not, further changes need to be made).

Also, external references should be indicated by "forest green" text color.

SuggestedRemedy

Change "Clause 139" to "Clause 140" and format as external reference (forest green).

Response *Response Status* **W**

ACCEPT.

Cl **168** *SC* **168.7.5.3** *P***38** *L***50** # 46

Ran, Adee Cisco Systems, Inc.

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

Reference to 121.8.5.3 is not a functional link. It should be formatted as an external reference.

Other similar external references appear in 168.7.13.1, 168.7.13.2, 168.7.13.3, 168.7.7 (3 references), 168.7.11, 168.8.1, and maybe other places.

SuggestedRemedy

Format all external references in forest green text color.

Response *Response Status* **W**

ACCEPT.

Cl **168** *SC* **168.1** *P***26** *L***33** # 68

Opsasnick, Eugene Broadcom, Inc.

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

Table 168-1 lists the Clause 91 RS-FEC as Required for 100GBASE-BR10, -BR20, and -BR40. Clause 91 defines both RS[528] and RS[544], but there is no indication which of these two FEC codes should be used with the BR10/20/40 PMDs. Subclauses 91.5.2.7 and 91.5.3.3 list which PHYs use RS[528] and which use RS[544] along with some other features of each FEC code.

SuggestedRemedy

Add Clause 91 to the standard and add the three PHYs of this standard to the list of PHYs that implement RS[544] as was done in 802.3ck for 100GBASE-CR1/KR1:

In 91.5.2.7 add:
Change the second sentence of the second paragraph of 91.5.2.7 (as modified by IEEE Std 802.3ck-2022)
as follows:

When used to form a 100GBASE-KP4, 100GBASE-CR2, 100GBASE-KR2, 100GBASE-VR1, 100GBASE-SR2, 100GBASE-SR1, 100GBASE-DR, 100GBASE-FR1, 100GBASE-LR1,100GBASE-CR1, or 100GBASE-KR1, 100GBASE-BR10, 100GBASE-BR20, or 100GBASE-BR40 PHY, the RS-FEC sublayer shall implement RS(544,514).

In 91.5.3.3 add:
Change the second sentence of the second paragraph of 91.5.3.3 (as modified by IEEE Std 802.3ck-2022)
as follows:

When used to form a 100GBASE-KP4, 100GBASE-CR2, 100GBASE-KR2, 100GBASE-VR1, 100GBASE-SR2, 100GBASE-SR1, 100GBASE-DR, 100GBASE-FR1, 100GBASE-LR1, 100GBASE-CR1, or 100GBASE-KR1, 100GBASE-BR10, 100GBASE-BR20, or 100GBASE-BR40 PHY, the RS-FEC sublayer shall be capable of correcting any combination of up to t=15 symbol errors in a codeword.

Change the third paragraph of 91.5.3.3 (as modified by IEEE Std 802.3ck-2022) as follows:

The Reed-Solomon decoder may provide the option to perform error detection without error correction to reduce the delay contributed by the RS-FEC sublayer. The presence of this option is indicated by the assertion of the FEC_bypass_correction_ability variable (see 91.6.8). When the option is provided, it is enabled by the assertion of the FEC_bypass_correction_enable variable (see 91.6.1). This option shall not be used when the RS-FEC sublayer is used to form part of a 100GBASE-CR2, 100GBASE-KR2, 100GBASE-VR1, 100GBASE-SR2, 100GBASE-SR1, 100GBASE-SR4, 100GBASE-DR, 100GBASE-FR1, 100GBASE-LR1, 100GBASE-CR1, or 100GBASE-KR1, 100GBASE-BR10, 100GBASE-BR20, or 100GBASE-BR40 PHY.

Change the last sentence of the last paragraph of 91.5.3.3 (as modified by IEEE Std 802.3ck-2022) as

follows:

When the RS-FEC sublayer is used to form a 100GBASE-KP4, 100GBASE-CR2, 100GBASE-KR2, 100GBASE-VR1, 100GBASE-SR2, 100GBASE-SR1, 100GBASE-DR, 100GBASE-FR1, 100GBASE-LR1, 100GBASE-CR1, or 100GBASE-KR1, 100GBASE-BR10, 100GBASE-BR20, or 100GBASE-BR40 PHY, the symbol error threshold shall be K=6380.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **168** *SC* **168.1** *P***26** *L***33** # 69

Opsasnick, Eugene Broadcom, Inc.

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

Table 168-1 lists the Clause 91 RS-FEC as Required for 100GBASE-BR10, -BR20, and -BR40. Subclause 91.5.3.3.1 should be updated to add the 3 new PHYs using RS[544] to the list of PHYs using the optional FEC Degraded SER feature as defined in Clause 91.

SuggestedRemedy

In 91.5.3.3.1 add:
Change the first paragraph of 91.5.3.3.1 (as modified by IEEE Std 802.3ck-2022) as follows:

For 100GBASE-CR2, 100GBASE-KR2, 100GBASE-VR1, 100GBASE-SR2, 100GBASE-SR1, 100GBASE-DR, 100GBASE-FR1, 100GBASE-LR1, 100GBASE-CR1, and 100GBASE-KR1, 100GBASE-BR10, 100GBASE-BR20, and 100GBASE-BR40 PHYs an optional FEC degraded symbol error ratio function is available.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **168** *SC* **168.6.1** *P***33** *L***50** # 72

Johnson, John Broadcom

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

It's unnecessary to compare with Cl. 139 in footnote (b).

SuggestedRemedy

Delete "Even though the representation of the OMAouter requirement is different from that in Clause 139, they are consistent." from footnote (b).

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #41.

Cl **157** *SC* **157.1.2** *P***17** *L***30** # 86

Mi, Guangcan Huawei Technologies Co., Ltd

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

in “131.1.2 (for 50 Gb/s), 80.1.3 (for 100 Gb/s)”, missing and

SuggestedRemedy

change to "131.1.2 (for 50 Gb/s), and 80.1.3 (for 100 Gb/s)"

Response *Response Status* **W**

ACCEPT.

Cl **168** *SC* **168.6.1** *P***33** *L***15** # 89

Mi, Guangcan Huawei Technologies Co., Ltd

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

the labe of wavelength is currently written as 100GBASE-BRx-D center wavelengths (range) or 100GBASE-BRx-U center wavelengths (range). This doesn't seem right. The upstream and down stream would only have one wavelength each. The wavelength can not be precisely controlled, thus a range is specified allowing the center wavelength to drift or shift. It is however a single wavelength, therefore the plural form here is not appropriate.

SuggestedRemedy

change wavelengths to wavelength in both cases of upstream and downstream.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy to Table 168-6 and Table 168-7.

Cl **168** *SC* **168.7.6** *P***39** *L***27** # 92

Mi, Guangcan Huawei Technologies Co., Ltd

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

"The TECQ of each lane is measured using the methods specified for TDECQ in 168.7.5, except that the test fiber is not used."

There is only one lane in BRx PMDs in each direction.

SuggestedRemedy

delete " of each lane"

Response *Response Status* **W**

ACCEPT.

Cl **1** *SC* **1.4** *P***11** *L***0** # 96

Slavick, Jeff Broadcom

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

Missing definitions for 100GBASE-BR10/20

SuggestedRemedy

1.4.x 100GBASE-BR10: IEEE 802.3 Physical Layer specification for a 100 Gb/s bidirectional link over one single-mode fiber with reach up to at least 10 km. There are different specifications for 100GBASE-BR10-D and 100GBASE-BR10-U; a transmission path connects one to the other. (See IEEE Std 802.3, Clause 168.)
1.4.y 100GBASE-BR20: IEEE 802.3 Physical Layer specification for a 100 Gb/s bidirectional link over one single-mode fiber with reach up to at least 20 km. There are different specifications for 100GBASE-BR20-D and 100GBASE-BR20-U; a transmission path connects one to the other. (See IEEE Std 802.3, Clause 168.)
1.4.z 100GBASE-BR40: IEEE 802.3 Physical Layer specification for a 100 Gb/s bidirectional link over one single-mode fiber with reach up to at least 40 km. There are different specifications for 100GBASE-BR40-D and 100GBASE-BR40-U; a transmission path connects one to the other. (See IEEE Std 802.3, Clause 168.)

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **45** *SC* **45.2.1.27b** *P***14** *L***13** # 97

Slavick, Jeff Broadcom

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

Std 802.3-2022 BiDi PMA/PMD extended ability 2 is clause 45.2.1.33 and Table 45-37.

SuggestedRemedy

Fix the Clause numbering to align with base standard and update editing instructions appropriately.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #144.

Cl **45** *SC* **45.2.1.27b** *P***14** *L***44** # 98

Slavick, Jeff Broadcom

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

The descriptions of the bits are done from highest number bit to lowest. So the new clauses that are adding higher numbered bits should be inserted "before" the existing sub-clases describing bits 5:0.

SuggestedRemedy

Change editing instruction to insert the new clauses "before 45.2.1.33.1" (after correcting to base standard clause numbers)

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **45** *SC* **45.2.1.28** *P***15** *L***44** # 99

Slavick, Jeff Broadcom

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

In Table 45-30 the entries for 101110 and 101111 are no longer specified.

SuggestedRemedy

Add in a 10111x = Reserved to Table 45-30

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #147.

Cl **168** *SC* **168.1** *P***26** *L***7** # 100

Slavick, Jeff Broadcom

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

Remove all the Editors notes stating what the section was leveraged from. This note has no life span and should not be included in the publication.

SuggestedRemedy

Remove all the Editors notes stating which clause was used to create the current clause (10 occurences).

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #120.

Cl **80** SC **80.4** P**16** L**13** # 101

Slavick, Jeff Broadcom

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

The other optical PHYs in this table note that the delay time includes 2m of fiber.

SuggestedRemedy

Add "Includes 2m of fiber." before the See 168.3.1

Response *Response Status* **W**

ACCEPT.

Cl **157** SC **157.1** P**17** L**1** # 102

Slavick, Jeff Broadcom

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

There is no editing instruction for Clause 157 which is an existing base standard clause.

SuggestedRemedy

Reduce the amount of text, Figures and Tables to only be changes being made to Clause 157 and not the entire Clause. Inserting appropriate editing instructions for section that is being changed.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
Implement suggested remedy with editorial license.

Cl **157** SC **157.6** P**24** L**51** # 103

Slavick, Jeff Broadcom

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

Clauses 161-167 are related to things other than the BiDi PMDs

SuggestedRemedy

Remove the strikethough of Clause 160 and insert a , between Clause 160 and Clause 168

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #167.

Cl **168** SC **168.12.3** P**49** L**15** # 104

Slavick, Jeff Broadcom

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

INS is used as a conditonal in 168.12.4.8 so it needs a *

SuggestedRemedy

Add a * before INS in the item column in 168.12.3

Response *Response Status* **W**

ACCEPT.

Cl **30** SC **30.5.1.1.2** P**12** L**12** # 105

Slavick, Jeff Broadcom

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

100GBASE-T does not exist.

SuggestedRemedy

Change the editing instructions to be "Insert the following types into the “APPROPRIATE SYNTAX” section of 30.5.1.1.2 before 100GBASE-CR1 (as inserted by IEEE Std. 802.3ck-2022):"

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #135.

Cl **FM** *SC* **FM** *P* **1** *L* **23** # 112

Zimmerman, George ADI,APLgp,Cisco,Marvell,OnSemi,Sony,SenTekse

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

This draft is amending IEEE Std 802.3-2022 which has already been amended now by at least 9 published amendments, and at least one in WG ballot ahead of this draft. It is important to keep track of the other changes so that the new changes are properly correlated with clause numbers and other changes made. Since this amendment makes changes to clauses 30 & 45 in places near or at where other amendments have, this may create errors. Hence my marking this comment, which seems minor, as required.

SuggestedRemedy

Replace "IEEE Std 802.3y-20xx" with the list of published amendements and those ahead of this amendment in the process. (Note - Include at least the published amendments (dd, cs, db, ck, de, cx, cz, cy, df , and Cor1 listed in the introduction), as well as 802.3da which is ahead of this amendment.
Editor to review edits to existing clauses (30, 45, and 80) to determine whether any section numbering or editing instructions for location of changes are altered.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Replace "IEEE Std 802.3y-20xx" with the list of published amendements and those ahead of this amendment in the process.
Follow the latest template (Version 5.5).

Cl **00** *SC* **0** *P* **8** *L* **4** # 223

Wienckowski, Natalie IVN Solutions LLC

Comment Type **ER** *Comment Status* **R** *resolved*

The box under "Introduction" needs to be updated with P802.3dk information.

SuggestedRemedy

Change: Std 802.3-20xx
To: Std 802.3dk-202x
and Change: Amendment title (copy from PAR)
To: Greater than 50 Gb/s Bidirectional Optical Access PHYs Task Force

Response *Response Status* **U**

REJECT.
See comment #222.