Cl **00** *SC* *P* *L* # 8

Lusted, Kent Intel

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

The aMAUType entries for 1000BASE-PX30D, 1000BASE-PX30U, 1000BASE-PX40D, 1000BASE-PX40U, 1000BASE-PX20D and 1000BASE-PX20U are identical. It is "one single-mode fiber OMP ... 20 km PHY as specified in Clause 60." The obvious difference is ONU vs. OLT but nothing else stands out.

It would be nice to include a little more description of how these Type entries are different from each other.

SuggestedRemedy

Consider adding the typical split ratio information from Clause 60.1 to the Type description.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #44 resolution

Cl **00** *SC* **0** *P* *L* # 15

Anslow, Pete Ciena

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

On page 27, line 1 the editing instruction says "Change Table 60–2 as shown below:"
For a "Change" editing instruction it is not appropriate to show two versions of the table, one with a red cross through it.
Since the table has completely changed, this is appropriate to a Replace editing instruction, where only the new version of the table is shown and without strikethrough or underline font.

Same issue in Table 75-4, Table 75-7, and Table 75-9

SuggestedRemedy

Make the editing instruction "Replace", show only the new version of the table without strikethrough or underline font.

Make the equivalent change for Table 75-4, Table 75-7, and Table 75-9

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* *L* # 16

Anslow, Pete Ciena

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

Subclause 1.2.6 of IEEE Std 802.3 says:
"Unless otherwise stated, numerical limits in this standard are to be taken as exact, with the number of significant digits and trailing zeros having no significance."

In view of this, it is not appropriate to show trailing zeros on limits that are less than 1.

SuggestedRemedy

Remove trailing zeros from:
Table 60-8a (+-0.10). i.e. change "+-0.10" to "+-0.1"
Table 60-8c (-5.00, -29.00, -27.60)
Table 60-8d (0.20, 0.20, 0.30, .20, 0.20, 0.30, 1.0, 1.0)
Table 60-9 (23.0, 21.0, 26.0, 26.0, 30.0, 34.0, 34.0)
Table 60-10 (0.10)
Table 60-11 (0.20, 0.40, 0.30, 0.40)
Table 75-5 (0.40, 0.40)
Table 75-6 (1.90)
Table 75-8 (0.40, 0.40, 3.0, 3.0, 2.0, footnote 3.0, 2.0)
Table 75-11 (-20.50, -28.50, 3.10)
Table 75B-2 (23.0, 26.0)
Table 75C-1 (0.20, 0.20)
Table 75C-2 (0.30)
Table 75C-3 (0.40)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In addition to the Tables the commenter refers to, the same change is applied to Table 60-8e (1.20).

Cl **1** *SC* **1.4** *P* **13** *L* **1** # 1030

Ganga, Ilango Intel

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

Insert new definitions to Clause 1 (e.g. 1.4)
For example add new definitions for 1000BASE-PX30, PX40 etc., or alternatively update 1.4.26/27 to a more generic definition for PX PHYs.

SuggestedRemedy

As per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #997 resolution.

Cl **30** *SC* **30.5.1.1.2** *P* **13** *L* **1** # 46

Thomas McDermott Fujitsu Network Comm

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

The nomenclature chosen for describing the new aMAU type may be confusing.
In the previous edition, the nomenclature indicated the range of the EPON aMAU in kilometers.

1000GBASE-PX10D for example refers to a 10 km span.
1000GBASE-PD20D for example refers to a 20km span.

The new aMAU have nomenclature 1000GBASE-PX30D and 1000GBASE-40D, however the span for both is 20 km.
One might accidentally make the assumption that they refer to 30 km and 40km spans respectively.

Are 30 and 40 the best and most proper designators?

This concern is purely cosmetic to the draft

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #44 resolution

Cl **30** *SC* **30.5.1.1.2** *P* **13** *L* **3** # 1031

Ganga, Ilango Intel

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

There is mess up of tab formatting in the base document for all the rows in 30.5.1.1.2.
Change editing instruction to also include fixing the formatting issue in the base document.

SuggestedRemedy

As per comment

Response *Response Status* **C**

REJECT.

Editing instruction is not changed. Just tab formatting should be corrected.

Cl **30** *SC* **30.5.1.1.2** *P* **14** *L* **19** # 44

Hajduczenia, Marek ZTE Corporation

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

MAU entries for 1000BASE-PX30D and 1000BASE-PX40D are identical, given that the distance supported by PX30 and PX40 devices is identical. The same problem exists for 1000BASE-PX30U and 1000BASE-PX40U

SuggestedRemedy

Change definitions of specific MAU types introduces by 802.3bk as follows:
1000BASE-PX30D One single-mode fiber OMP OLT 20km, at least 1:32 split PHY as specified in Clause 60
1000BASE-PX30U One single-mode fiber OMP ONU 20km, at least 1:32 split PHY as specified in Clause 60
1000BASE-PX40D One single-mode fiber OMP OLT 20km, at least 1:64 split PHY as specified in Clause 60
1000BASE-PX40U One single-mode fiber OMP ONU 20km, at least 1:64 split PHY as specified in Clause 60

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change definitions of 1000BASE-PX MAU types as follows:
1000BASE-PX10D One single-mode fiber OMP OLT PHY, as specified in Clause 60, supporting the distance of at least 10 km, and the split of at least 1:16 split
1000BASE-PX10U One single-mode fiber OMP ONU PHY, as specified in Clause 60, supporting the distance of at least 10 km, and the split of at least 1:16 split

1000BASE-PX20D One single-mode fiber OMP OLT PHY, as specified in Clause 60, supporting the distance of at least 20 km, and the split of at least 1:16 split
1000BASE-PX20U One single-mode fiber OMP ONU PHY, as specified in Clause 60, supporting the distance of at least 20 km, and the split of at least 1:16 split

1000BASE-PX30D One single-mode fiber OMP OLT PHY, as specified in Clause 60, supporting the distance of at least 20 km, and the split of at least 1:32 split
1000BASE-PX30U One single-mode fiber OMP ONU PHY, as specified in Clause 60, supporting the distance of at least 20 km, and the split of at least 1:32 split

1000BASE-PX40D One single-mode fiber OMP OLT PHY, as specified in Clause 60, supporting the distance of at least 20 km, and the split of at least 1:64 split
1000BASE-PX40U One single-mode fiber OMP ONU PHY, as specified in Clause 60, supporting the distance of at least 20 km, and the split of at least 1:64 split

Cl **45** *SC* **45.2.1.78.4** *P* *L* # 45

Wael William Diab Broadcom

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

This comment is based on the maintenance discussion in November to implement MR #1235 in the next balloted amendment which is P802.3bk. Request is to implement the MR.

SuggestedRemedy

Please implement MR with the succgested change as suggested in http://www.ieee802.org/3/maint/requests/maint_1235.pdf

Response *Response Status* **C**

ACCEPT.

Cl **56** *SC* **56.1.3** *P* *L* # 997

John D'Ambrosia Dell

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

As the commenter looked at Clause 1.4 it was noted that the entry for 10GBASE-PR is simply noted as “Physical Layer specification for a 10 Gb/s (10/10G-EPON) point-tomultipointlink over one single-mode optical fiber.” However, review of the text in 56.1.3 and Table 56-1 seems to indicate that it 10GBASE-PR is not a single specification, as there are a multitude of variants of the 10GBASE-PR. The definition needs to be modified to accurately reflect this issue.

All Physical layer specification names should be cross-correlated to section 1.4 to ensure that accurate definitions have been provided.

SuggestedRemedy

Modify definition of 1.4.42
1.4.42 10GBASE-PR: IEEE 802.3 Physical Layer specification for a 10 Gb/s (10/10G-EPON) point-tomultipoint
link over one single-mode optical fiber.
NOTE—See IEEE Std 802.3 Clause 75, Clause 76, and Clause 77.

To

1.4.42 10GBASE-PR: IEEE 802.3 Physical Layer specifications for a 10 Gb/s (10/10G-EPON) point-tomultipoint
link over one single-mode optical fiber.
NOTE—See Table 56-1, IEEE Std 802.3 Clause 75, Clause 76, and Clause 77.

Review all PHY names in 802.3bk against Clause 1.4 to ensure that they are accurately described.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

1. Add the text of 1.4.26, 1.4.27, 1.4.42, and 1.4.43 of IEEE Std 802.3-2012 to the next draft of P802.3bk.

2. Change the text of 1.4.42 and 1.4.43 to:

===
1.4.42:
A collection of IEEE 802.3 Physical Layer specifications for a 10 Gb/s (10/10G-EPON) point-to-multipoint link over one single-mode optical fiber.
NOTE-See IEEE Std 802.3, Table 56-1, Clause 75, Clause 76, and Clause 77

1.4.43:
A collection of IEEE 802.3 Physical Layer specifications for a 10 Gb/s downstream, 1 Gb/s upstream (10/1G-EPON) point-to-multipoint link over one single-mode optical fiber.
NOTE-See IEEE Std 802.3, Table 56-1, Clause 75, Clause 76, and Clause 77
===

3. Change the definition of 1.4.26 to:
A collection of IEEE 802.3 Physical Layer specifications for a 1000 Mb/s point-to-multipoint link over one single-mode optical fiber.
NOTE-See IEEE Std 802.3, Table 56-1, Clause 60, Clause 65, and Clause 64.

4. Delete the definition of 1.4.27

Cl **56** *SC* **56.1.3** *P* **21** *L* **12** # 37

Trowbridge, Steve Alcatel-Lucent

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

Paragraph should be consistent with respect to using "PON" or spelling out "Passive Optical Networks"

SuggestedRemedy

Since the pre-existing text all spells out "Passive Optical Networks", the added text should do the same.

Response *Response Status* **C**

REJECT.

In the pre-existing text, "PON" is used from the second appearance of "Passive Optical Network" as seen in 56.1.3 of IEEE Std 802.3-2012.

Cl **56** *SC* **56.1.3** *P* **21** *L* **5** # 17

Anslow, Pete Ciena

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

The editing instruction says: "Change text in 56.1.3 as shown below, ..." but only the third paragraph of 56.1.3 is shown.

Likewise, the editing instruction on line 17 says "Change the text in 56.1.3 ..." but only the lettered list in 56.1.3 is shown.

SuggestedRemedy

Change the editing instruction on line 5 to: "Change the third paragraph of 56.1.3 as follows, ..."

Change the editing instruction on line 17 to: "Change the lettered listing of power budgets supported by EPON in 56.1.3, adding description of PR40 and PRX40 power budgets in items d) and h) into the list as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **56** *SC* **56.1.3** *P* **23** *L* **13** # 18

Anslow, Pete Ciena

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

In Table 56-1, the rows for 10PASS-TS-O and 2BASE-TL-O contain "10 Mb/s" and "2 Mb/s" respectively where the "Mb/s" is shown in underline font.
However, this text has not been added by the 802.3bk amendment as implied by the underline font, but was incorrectly shown in underline font in the 802.3 revision document D 3.2.
This error is being corrected in the published version of IEEE Std 802.3-2012, so please remove the underline in P802.3bk.

SuggestedRemedy

As P802.3bk is an amendment to the published version of IEEE Std 802.3-2012, show these 2 instances of "Mb/s" in normal font.

Response *Response Status* **C**

ACCEPT.

Cl **56** *SC* **56.1.3** *P* **23** *L* **33** # 38

Trowbridge, Steve Alcatel-Lucent

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

2nd line of the table - right border line width should match the rest of the table boundary.

SuggestedRemedy

Fix the line width on the right border.

Response *Response Status* **C**

ACCEPT.

Cl **56** *SC* **56.1.3** *P* **29** *L* **23** # 1014

Law, David HP

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

IEEE Std 802.3av-2009 changed the last paragraph of 56.1.3 'Physical Layer signaling systems' to read 'Table 56-2 specifies the correlation between nomenclature and clauses for P2P systems, while Table 56-3 specifies the correlation between nomenclature and clauses for P2MP systems.', deleted the rows '1000BASE-PX10-D', '1000BASE-PX10-U', '1000BASE-PX20-D' and '1000BASE-PX20-U' from Table 56-2 and inserted a new table 56-3 'Nomenclature and clause correlation for P2MP systems'.

Based on this, the Clause 60 columns '1000BASE-PX10 PMD' and '1000BASE-PX20 PMD' became empty and probably should have been deleted along with the other changes to split the one table in to two, one for P2P, one for P2MP.

In addition two new Clause 60 columns '1000BASE-PX30 PMD' and '1000BASE-PX40 PMD' have been added to Table 56-3 'Nomenclature and clause correlation for P2MP systems' with completed PHY rows.

SuggestedRemedy

Rather than add two new Clause 60 columns '1000BASE-PX30 PMD' and '1000BASE-PX40 PMD' that are empty, for P2MP PMDs to a table that the text describes as '... specifies the correlation between nomenclature and clauses for P2P systems ...' suggest that:

[1] The Clause 60 columns '1000BASE-PX10 PMD', '1000BASE-PX20 PMD', 1000BASE-PX30 PMD' and '1000BASE-PX40 PMD' are deleted.

[2] The title of Table 56-2 is changed to read 'Nomenclature and clause correlation for P2P systems'.

Response *Response Status* **C**

ACCEPT.

Cl **56** *SC* **Table 56-1** *P* **23** *L* **19** # 9

Winkel, Ludwig Siemens AG

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

The indexed foot notes should be part of the Table and not outside the Table.

SuggestedRemedy

Move the Table foot notes in a merged last line of the Table.

Response *Response Status* **C**

REJECT.

The text in the footnote is already merged and a part of the Table. The current format is consistent with the style manual and published version (2012) of the standard and as such, no modification will be made.

Cl **60** *SC* **1** *P* **25** *L* **15** # 1005
Remein, Duane Futurewei Technologie

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

Change "the reach of" to "a reach of" in 2 places in the para (line 15 & 17).

SuggestedRemedy

per comment

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **1** *P* **25** *L* **24** # 1006
Remein, Duane Futurewei Technologie

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

Change "This clause specifies the single-mode fiber medium" to "This clause specifies a single-mode fiber medium"

SuggestedRemedy

per comment

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **1** *P* **26** *L* **13** # 1007
Remein, Duane Futurewei Technologie

Comment Type **E** *Comment Status* **A** *DS/US, footnote a*

The table would be more readable if note "a" was referenced to the row header "Transmit direction" rather than each entry of US/DS.

SuggestedRemedy

put note reference with "Transmit direction" and remove from "US" & "DS"

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **1.1** *P* **26** *L* **32** # 1000
Remein, Duane Futurewei Technologie

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

As written this states all PMDs have objectives of "1000 Mb/s up to 20 km on one single-mode fiber supporting a fiber split ratio of 1:64."

SuggestedRemedy

Reword para so objective for each PMD are clear.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See "8023bk_1301_remein_1.pdf".

Cl **60** *SC* **1.4** *P* **27** *L* **14** # 1001
Remein, Duane Futurewei Technologie

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

Seems like this entire table should be underlined.

SuggestedRemedy

underline entire table

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See Pete Anslow's comment

Cl **60** *SC* **4A.1** *P* **28** *L* **9** # 1002
Remein, Duane Futurewei Technologie

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

Wavelength range is excessively broad, surely we can do a better job of conserving the limited resourse of Optical Spectrum than we coiuld accomplish 10 years ago

SuggestedRemedy

Change 1260-1360 to 1290-1330 (same as PRX40-U), remove rows as appropriate in Table 60-8b and update Fig 60-4a as appropriate.

Response *Response Status* **C**

REJECT.

Implementing this comment would mean that existing PX30-U implementations might become non-compliant.

Cl **60** *SC* **4b.1** *P* **31** *L* **19** # 5

Guohua, Kuang ZTE Corporation

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

According to the minimum channel insertion loss for PX40 as 18 dB.
so we suggest to change US parameter of PX40 in Table 60-8e.
at OLT side: (Rx) average receive power(max) from -8 dBm to -12 dBm
Damage threshold (max) from -3 dBm to -6 dBm
at ONU side: (Tx): Average launch power(max) from 7 dBm to 6 dBm
now the mini CHIL for PX40 US = 6-(-12)= 18 dB is satisfied.

SuggestedRemedy

Change Average launch power (max) for 1000BASE-PX40-U from "7" to "6".
See 8023bk_1301_Kuang_1.pdf for details.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **4b.2** *P* **32** *L* **14** # 3

Guohua, Kuang ZTE Corporation

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

According to the minimum channel insertion loss for PX40 as 18 dB.
so we suggest to change US parameter of PX40 in Table 60-8e.
at OLT side: (Rx) average receive power(max) from -8 dBm to -12 dBm
Damage threshold (max) from -3 dBm to -6 dBm
at ONU side: (Tx): Average launch power(max) from 7 dBm to 6 dBm
now the mini CHIL for PX40 US = 6-(-12)= 18 dB is satisfied.

SuggestedRemedy

Change Average receive power (max) for 1000BASE-PX40-D from "-8" to "-12" .
See 8023bk_1301_Kuang_1.pdf for details.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **4b.2** *P* **32** *L* **15** # 4

Guohua, Kuang ZTE Corporation

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

According to the minimum channel insertion loss for PX40 as 18 dB.
so we suggest to change US parameter of PX40 in Table 60-8e.
at OLT side: (Rx) average receive power(max) from -8 dBm to -12 dBm
Damage threshold (max) from -3 dBm to -6 dBm
at ONU side: (Tx): Average launch power(max) from 7 dBm to 6 dBm
now the mini CHIL for PX40 US = 6-(-12)= 18 dB is satisfied.

SuggestedRemedy

Change Damage threshold (max) for 1000BASE-PX40-D from "-3" to "-6".
See 8023bk_1301_Kuang_1.pdf for details.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **5** *P* **33** *L* **7** # 1003

Remein, Duane Futurewei Technologie

Comment Type **E** *Comment Status* **A** *DS/US, footnote a*

The table would be more readable if note "a" was referenced to thetable title rather than each entry of US/DS.

SuggestedRemedy

See Table 56-3 for an example of how you've done this before.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add superscript "a" in Description column, and strike "a" in DS and US columns.

Related comment: #1007

Cl **60** *SC* **60.1** *P* **25** *L* **35** # 19

Anslow, Pete Ciena

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

The text "This allows certain upgrade possibilities from 10 km to 20 km PONs." is the fourth sentence of the second paragraph of 60.1 in the base document.
However, this text is missing from the D 2.0 amendment. If it is proposed to be deleted, then it must be shown in strikethrough font.

SuggestedRemedy

Show this text either in strikethrough or normal font.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add the following text in normal font at the end of the second paragraph of 60.1:
"This allows certain upgrade possibilities from 10 km to 20 km PONs."

Cl **60** *SC* **60.1** *P* **26** *L* **12** # 20

Anslow, Pete Ciena

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

In Table 60-1:
in the row "Transmit direction", "Upstream" has been changed to "US" (2 instances) and "Downstream" has been changed to "DS" (2 instances). However, this is only shown with "DS" and "US" in underline font. The full versions should be shown in strikethrough font. Same issue in Table 60-9.

Also, in Table 60-1 footnote d is shown as all underline font, but "The differential insertion loss for a link is the difference between the maximum and minimum channel insertion loss" was there as footnote c in the base version, so this should not be underlined.

SuggestedRemedy

Show the deleted "pstream" and "ownstream" in strikethrough font here and in Table 60-9.

Show the unchanged part of footnote d in normal font.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.1** *P* **26** *L* **7** # 990

Law, David HP

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

For consistency suggest that reference to IEC standard be included for PX10 and PX20 as it already is for PX30 and PX40.

SuggestedRemedy

Chnage 'B1.1, B1.3 SMF' is changed to read 'IEC 60793–2 B1.1, B1.3 SMF'.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.1** *P* **26** *L* **7** # 1039

Kramer, Glen Broadcom

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

Fiber types are specified differently for PX10/PX20 columns and PX30/PX40 columns. In one case "IEC 60793" is listed, in the other it is not. G.652 is listed for one, but not for the other.

SuggestedRemedy

Add missing text to PX10/PX20 column

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #990.

Cl **60** *SC* **60.10.3** *P* **38** *L* **11** # 1033

Ganga, Ilango Intel

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

Add missing cross-references to 60.3 and 60.4 in table rows 2 to 5.

SuggestedRemedy

As per comment

Response *Response Status* **C**

REJECT.

Missing cross-references will be added at the next revision of 802.3 Std.

Cl **60** *SC* **60.10.3** *P* **38** *L* **20** # 1024

Law, David HP

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

Items PX30U and PX30D have exactly the same feature, that is '1000BASE-PX30-D or 1000BASE-PX30-U PMD', reference exactly the same subclause 60.4a, and have exactly the same Value/Comment, that is 'Device supports 20 km', hence there is no difference between the two items. In addition the '1000BASE-PX30-U' and '1000BASE-PX30-D PMD' are not listed anywhere in the Major capabilities/options table.

PX30U however is used to predicate 1000BASE-PX30-U features, see subclause 60.10.4.5b 'PMD to MDI optical specifications for 1000BASE-PX30-U', therefore it would seem that '1000BASE-PX30-U' and not '1000BASE-PX30-D' should appear in the PX30U feature column. Similarly PX30D is used to predicate 1000BASE-PX30-D PMD features, see subclause 60.10.4.5a 'PMD to MDI optical specifications for 1000BASE-PX30-D', therefore it would seem that '1000BASE-PX30-D PMD' and not '1000BASE-PX30-U PMD' should appear in the PX30D feature column.

Similar issues seem to exist for all items with status O/1 in this table, including the existing items found in IEEE Std 802.3-2012, as well as all the items with status O/1 in the table in subclause 75.10.3 'Major capabilities/options'.

SuggestedRemedy

In subclause 60.10.3 'Major capabilities/options':

[1] Item PX10U, change '1000BASE-PX10-D or 1000BASE-PX10-U PMD' to read '1000BASE-PX10-U or 1000BASE-PX10-U PMD'.
[2] Item PX10D, change '1000BASE-PX10-D or 1000BASE-PX10-U PMD' to read '1000BASE-PX10-D or 1000BASE-PX10-D PMD'.
[3] Item PX20U, change '1000BASE-PX20-D or 1000BASE-PX20-U PMD' to read '1000BASE-PX20-U or 1000BASE-PX20-U PMD'.
[4] Item PX20D, change '1000BASE-PX20-D or 1000BASE-PX20-U PMD' to read '1000BASE-PX20-D or 1000BASE-PX20-D PMD'.
[5] Item PX30U, change '1000BASE-PX30-D or 1000BASE-PX30-U PMD' to read '1000BASE-PX30-U or 1000BASE-PX30-U PMD'.
[6] Item PX30D, change '1000BASE-PX30-D or 1000BASE-PX30-U PMD' to read '1000BASE-PX30-D or 1000BASE-PX30-D PMD'.
[7] Item PX40U, change '1000BASE-PX40-D or 1000BASE-PX40-U PMD' to read '1000BASE-PX40-U or 1000BASE-PX40-U PMD'.
[8] Item PX40D, change '1000BASE-PX40-D or 1000BASE-PX40-U PMD' to read '1000BASE-PX40-D or 1000BASE-PX40-D PMD'.

In subclause 75.10.3 'Major capabilities/options':

[1] Item PR10U, change '10GBASE-PR-D1 or 10GBASE-PR-U1 PMD' to read '10GBASE-PR-U1 or 10GBASE-PR-U1 PMD'.
[2] Item PR10D, change '10GBASE-PR-D1 or 10GBASE-PR-U1 PMD' to read '10GBASE-PR-D1 or 10GBASE-PR-D1 PMD'.
[3] Item PR20D, change '10GBASE-PR-D2 or 10GBASE-PR-U1 PMD' to read '10GBASE-PR-D2 or 10GBASE-PR-D2 PMD'.
[4] Item PR30U, change '10GBASE-PR-D3 or 10GBASE-PR-U3 PMD' to read '10GBASE-PR-U3 or 10GBASE-PR-U3 PMD'.
[5] Item PR30D, change '10GBASE-PR-D3 or 10GBASE-PR-U3 PMD' to read '10GBASE-PR-D3 or 10GBASE-PR-D3 PMD'.
[6] Item PR40U, change '10GBASE-PR-D4 or 10GBASE-PR-U4 PMD' to read '10GBASE-PR-U4 or 10GBASE-PR-U4 PMD'.
[7] Item PR40D, change '10GBASE-PR-D4 or 10GBASE-PR-U4 PMD' to read '10GBASE-PR-D4 or 10GBASE-PR-D4 PMD'.
[8] Item PRX10U, change '10/1GBASE-PRX-D1 or 10/1GBASE-PRX-U1 PMD' to read '10/1GBASE-PRX-U1 or 10/1GBASE-PRX-U1 PMD'.
[9] Item PRX10D, change '10/1GBASE-PRX-D1 or 10/1GBASE-PRX-U1 PMD' to read '10/1GBASE-PRX-D1 or 10/1GBASE-PRX-D1 PMD'.
[10] Item PRX20U, change '10/1GBASE-PRX-D2 or 10/1GBASE-PRX-U2 PMD' to read '10/1GBASE-PRX-U2 or 10/1GBASE-PRX-U2 PMD'.
[11] Item PRX20D, change '10/1GBASE-PRX-D2 or 10/1GBASE-PRX-U2 PMD' to read '10/1GBASE-PRX-D2 or 10/1GBASE-PRX-D2 PMD'.
[12] Item PRX30U, change '10/1GBASE-PRX-D3 or 10/1GBASE-PRX-U3 PMD' to read '10/1GBASE-PRX-U3 or 10/1GBASE-PRX-U3 PMD'.
[13] Item PRX30D, change '10/1GBASE-PRX-D3 or 10/1GBASE-PRX-U3 PMD' to read '10/1GBASE-PRX-D3 or 10/1GBASE-PRX-D3 PMD'.
[14] Item PRX40U, change '10/1GBASE-PRX-D4 or 10/1GBASE-PRX-U4 PMD' to read '10/1GBASE-PRX-U4 or 10/1GBASE-PRX-U4 PMD'.
[15] Item PRX40D, change '10/1GBASE-PRX-D4 or 10/1GBASE-PRX-U4 PMD' to read '10/1GBASE-PRX-D4 or 10/1GBASE-PRX-D4 PMD'.

[16] Item PR20U should be deleted as there is no such PHY/PMD as 10GBASE-PR-U2.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In subclause 60.10.3 'Major capabilities/options':
[1] Item PX10U, change '1000BASE-PX10-D or 1000BASE-PX10-U PMD' to read '1000BASE-PX10-U PHY or 1000BASE-PX10-U PMD'
[2] Item PX10D, change '1000BASE-PX10-D or 1000BASE-PX10-U PMD' to read '1000BASE-PX10-D PHY or 1000BASE-PX10-D PMD'
[3] Item PX20U, change '1000BASE-PX20-D or 1000BASE-PX20-U PMD' to read '1000BASE-PX20-U PHY or 1000BASE-PX20-U PMD'
[4] Item PX20D, change '1000BASE-PX20-D or 1000BASE-PX20-U PMD' to read '1000BASE-PX20-D PHY or 1000BASE-PX20-D PMD'
[5] Item PX30U, change '1000BASE-PX30-D or 1000BASE-PX30-U PMD' to read '1000BASE-PX30-U PHY or 1000BASE-PX30-U PMD'
[6] Item PX30D, change '1000BASE-PX30-D or 1000BASE-PX30-U PMD' to read '1000BASE-PX30-D PHY or 1000BASE-PX30-D PMD'
[7] Item PX40U, change '1000BASE-PX40-D or 1000BASE-PX40-U PMD' to read '1000BASE-PX40-U PHY or 1000BASE-PX40-U PMD'
[8] Item PX40D, change '1000BASE-PX40-D or 1000BASE-PX40-U PMD' to read '1000BASE-PX40-D PHY or 1000BASE-PX40-D PMD'

In subclause 75.10.3 'Major capabilities/options':
[1] Item PR10U, change '10GBASE-PR-D1 or 10GBASE-PR-U1 PMD' to read '10GBASE-PR-U1 PHY or 10GBASE-PR-U1 PMD'.
[2] Item PR10D, change '10GBASE-PR-D1 or 10GBASE-PR-U1 PMD' to read '10GBASE-PR-D1 PHY or 10GBASE-PR-D1 PMD'.
[3] Item PR20D, change '10GBASE-PR-D2 or 10GBASE-PR-U2 PMD' to read '10GBASE-PR-D2 PHY or 10GBASE-PR-D2 PMD'.
[4] Item PR30U, change '10GBASE-PR-D3 or 10GBASE-PR-U3 PMD' to read '10GBASE-PR-U3 PHY or 10GBASE-PR-U3 PMD'.
[5] Item PR30D, change '10GBASE-PR-D3 or 10GBASE-PR-U3 PMD' to read '10GBASE-PR-D3 PHY or 10GBASE-PR-D3 PMD'.
[6] Item PR40U, change '10GBASE-PR-D4 or 10GBASE-PR-U4 PMD' to read '10GBASE-PR-U4 PHY or 10GBASE-PR-U4 PMD'.
[7] Item PR40D, change '10GBASE-PR-D4 or 10GBASE-PR-U4 PMD' to read '10GBASE-PR-D4 PHY or 10GBASE-PR-D4 PMD'.
[8] Item PRX10U, change '10/1GBASE-PRX-D1 or 10/1GBASE-PRX-U1 PMD' to read '10/1GBASE-PRX-U1 PHY or 10/1GBASE-PRX-U1 PMD'.
[9] Item PRX10D, change '10/1GBASE-PRX-D1 or 10/1GBASE-PRX-U1 PMD' to read '10/1GBASE-PRX-D1 PHY or 10/1GBASE-PRX-D1 PMD'.
[10] Item PRX20U, change '10/1GBASE-PRX-D2 or 10/1GBASE-PRX-U2 PMD' to read '10/1GBASE-PRX-U2 PHY or 10/1GBASE-PRX-U2 PMD'.
[11] Item PRX20D, change '10/1GBASE-PRX-D2 or 10/1GBASE-PRX-U2 PMD' to read '10/1GBASE-PRX-D2 PHY or 10/1GBASE-PRX-D2 PMD'.
[12] Item PRX30U, change '10/1GBASE-PRX-D3 or 10/1GBASE-PRX-U3 PMD' to read '10/1GBASE-PRX-U3 PHY or 10/1GBASE-PRX-U3 PMD'.
[13] Item PRX30D, change '10/1GBASE-PRX-D3 or 10/1GBASE-PRX-U3 PMD' to read '10/1GBASE-PRX-D3 PHY or 10/1GBASE-PRX-D3 PMD'.
[14] Item PRX40U, change '10/1GBASE-PRX-D4 or 10/1GBASE-PRX-U4 PMD' to read '10/1GBASE-PRX-U4 PHY or 10/1GBASE-PRX-U4 PMD'.
[15] Item PRX40D, change '10/1GBASE-PRX-D4 or 10/1GBASE-PRX-U4 PMD' to read '10/1GBASE-PRX-D4 PHY or 10/1GBASE-PRX-D4 PMD'.
Delete PR20U as there is no such PHY/PMD as 10GBASE-PR-U2.

Change the values for the subclause columns in the PICS table in 75.10.3 as follows:

==========
Change "75.4, 75.5" to "75.5" for following items:
PR10U
PR30U
PR40U
PRX10U
PRX20U
PRX30U
PRX40U

Change "75.4, 75.5" to "75.4" for following items:
PR10D
PR20D
PR30D
PR40D
PRX10D
PRX20D
PRX30D
PRX40D
==========

Fix also text in Feature for PX20U2 item in 60.10.4.5. Change "1000BASE-PX20-D receiver" to "1000BASE-PX20-U receiver"

Cl **60** *SC* **60.10.4.5d** *P* **40** *L* **8** # 1016

Law, David HP

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

Shouldn't the feature for Item 'PX40U2' be '1000BASE-PX40-U receiver' (not 1000BASE-PX40-D) since subclause 60.10.4.5d is titled 'PMD to MDI optical specifications for 1000BASE-PX40-U' and Table 60-8e reference in the value/comment is '... 1000BASE-PX40-U receive characteristics'.

SuggestedRemedy

Change '1000BASE-PX40-D receiver' to read '1000BASE-PX40-U receiver'.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.4a.1** *P* **27** *L* **53** # 994

Law, David HP

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

The text in subclause 60.4a.1 'Transmitter optical specifications' states that 'The 1000BASE-PX30-D and 1000BASE-PX30-U transmitter's signaling speed, operating wavelength, spectral width, average launch power, extinction ratio, return loss tolerance, OMA, eye and TDP shall meet the specifications defined in Table 60-8a ..' and that 'Its RIN15 OMA should meet the value listed in Table 60-8a ...'. I read this to state that the signaling speed, operating wavelength, spectral width, average launch power, extinction ratio, return loss tolerance, OMA, eye and TDP values in Table 60-8a are normative, and that the RIN15 OMA value is recommended.

Looking at Table 60-8a there appeared to be a number of other parameters not covered by the text of subclause 60.4a.1, these are Ton, Toff, Optical return loss of ODN and Transmitter reflectance. However the PICS in subclause 60.10.4.5a 'PMD to MDI optical specifications for 1000BASE-PX30-D' item 'PX30D1', '1000BASE-PX30-D transmitter' has a Value/Comment that reads 'Meets specifications in Table 60-8a' and a status of 'PX30D:M' which implies all the specifications in Table 60-8a have to be met and are therefore normative.

SuggestedRemedy

[1] Add text to subclause 60.4a.1 that makes it clear if Ton, Toff, Optical return loss of ODN and Transmitter reflectance are normative as well. I would suggest the best approach would be to state that the specification in Table 60-8a are normative for a 1000BASE-PX30 transmitter with the exception of a list of items that are just recommendations, such as RIN15 OMA, rather than separate lists of normative requirements and exceptions which risks an item being missed off.

[2] The PICS should be updated so that items in Table 60-8a that are recommendations, and therefore are not normative, such as RIN15 OMA, are marked with a status of O rather than M. Assuming that RIN15 OMA is the only non-normative item in Table 60-8a the items would be:

60.10.4.5a PMD to MDI optical specifications for 1000BASE-PX30-D

Item: PX30D1
Feature: 1000BASE-PX30-D transmitter
Subclause: 60.4a.1
Value/Comment: Meets normative specifications in Table 60-8a
Status: PX30D:M
Support: Yes [ ] N/A [ ]

Item: PX30D2
Feature: 1000BASE-PX30-D transmitter RIN15 OMA
Subclause: 60.4a.1
Value/Comment: Meets the RIN15 OMA specification in Table 60-8a
Status: PX30D:O
Support: Yes [ ] No [ ] N/A [ ]

Renumber subsequent PICS items as required.

Subclause 60.10.4.5b PMD to MDI optical specifications for 1000BASE-PX30-U

Item: PX30U1
Feature: 1000BASE-PX30-U transmitter
Subclause: 60.4a.1
Value/Comment: Meets normative specifications in Table 60-8a
Status: PX30U:M
Support: Yes [ ] N/A [ ]

Item: PX30U2
Feature: 1000BASE-PX30-U transmitter RIN15 OMA
Subclause: 60.4a.1
Value/Comment: Meets the RIN15 OMA specification in Table 60-8a
Status: PX30U:O
Support: Yes [ ] No [ ] N/A [ ]

Renumber subsequent PICS items as required.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the first two sentences of 60.4a.1 as follows:

From:
"The 1000BASE-PX30-D and 1000BASE-PX30-U transmitter's signaling speed, operating wavelength, spectral width, average launch power, extinction ratio, return loss tolerance, OMA, eye and TDP shall meet the specifications defined in Table 60–8a per measurement techniques described in 60.7. Its RIN15OMA should meet the value listed in Table 60–8a per measurement techniques described in 60.7.7"

to

"The 1000BASE-PX30-D and 1000BASE-PX30-U transmitter's specifications described in Table 60-8a are normative requirement, per measurement techniques described in 60.7, with the exception of RIN15OMA which is an optional requirement, per measurement techniques described in 60.7.7."

Change the tables in 60.10.4.5a and 60.10.4.5b per commenter's suggestion.

Similar changes need to be applied to subclauses describing PX10 and PX20 transmitter specifications, as well as associated PICS. Subclause 60.3.1 and 60.4.1, as well as 60.10.4.2, 60.10.4.3, 60.10.4.4, and 60.10.4.5 will be added to D2.1 with appropriate changes.

Cl **60** *SC* **60.4a.1** *P* **28** *L* **22** # 1032

Ganga, Ilango Intel

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

In Tables 60-8a c, d and e, abbreviation N.A. is used for not applicable whereas most of the document uses N/A to indicate not applicable. Change to N/A for consistency.

SuggestedRemedy

As per comment

Response *Response Status* **C**

ACCEPT.

"N.A." in Tables 60-6, 60-8, 60-8a, c, d, and e are changed to "N/A".

Cl **60** *SC* **60.4a.1** *P* **28** *L* **38** # 21

Anslow, Pete Ciena

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

Table 60-8b is not formatted as per usual IEEE documents.

The first row only should be a heading row in bold font with a thicker line underneath it (Thin rather than Very Thin).
The remaining rows should be non bold.
Where the table splits across pages, the "bottom ruling" should be there on the first page and the title should have "(continued)" after it on the second page.
Remove the blank row - change the ruling thickness between rows to provide a separator.

SuggestedRemedy

Configure the table to have 1 "heading row" and the rest "body rows".
Uncheck "Draw Bottom Ruling on Last Sheet Only" in Table designer.
Place the cursor at the end of table title on first page. Click on the Variables tab (bottom left of the editing window). Highlight the "Table Continuation" variable and click on the Insert icon. This will add the (continued) on subsequent pages.
Remove the blank row - change the ruling thickness between rows to provide a separator.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Configure the table to have 1 "heading row" and the rest "body rows".
Add a word "(continued)" at the end of the table title spanning the second page.
Where the table splits across pages, the "bottom ruling" will be added on the first page.

Blank row remains as is. The blank row in Table 60-8b matches that used in Tables 59-4, 60-4 and 60-7 of IEEE Std 802.3-2012. Replacing the blank row with a thick line in all of these tables would be more appropriate to a revision of the base standard 802.3.

Cl **60** *SC* **60.4a.1** *P* **28** *L* **38** # 13

Mark, Laubach Broadcom Corporation

Comment Type **E** *Comment Status* **A** *Title of Table 60-8b*

Lacking "-U" in Table 60-8b title or additional in FIgure 60-4a?

SuggestedRemedy

Should Table 60-8b and Figure 60-4a agree on use of "-U" in title?

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the title of Table 60-8b to "Table 60–8b—1000BASE-PX30-U transmitter spectral limits"

Cl **60** *SC* **60.4b.1** *P* **31** *L* **5** # 995

Law, David HP

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

The text in subclause 60.4b.1 'Transmitter optical specifications' states that transmitter's signaling speed, operating wavelength, Side Mode Suppression Ratio (min), average launch power, extinction ratio, return loss tolerance, OMA, eye and TDP shall meet the specifications defined in Table 60-8d ...' and that 'Its RIN15 OMA should meet the value listed in Table 60-8d ...'. I read this to state that the signaling speed, operating wavelength, Side Mode Suppression Ratio (min), average launch power, extinction ratio, return loss tolerance, OMA, eye and TDP values in Table 60-8d are normative, and that the RIN15 OMA value is recommended.

Looking at Table 60-8d there appeared to be a number of other parameters not covered by the text of subclause 60.4b.1, these are Ton, Toff, Optical return loss of ODN and Transmitter reflectance. However the PICS in subclause 60.10.4.5c 'PMD to MDI optical specifications for 1000BASE-PX40-D' item 'PX40D1', ' 1000BASE-PX40-D transmitter' has a Value/Comment that reads 'Meets specifications in Table 60-8d' and a status of 'PX40D:M' which implies all the specifications in Table 60-8d have to be met and are therefore normative.

A similar

SuggestedRemedy

[1] Add text to subclause 60.4b.1 that makes it clear if Ton, Toff, Optical return loss of ODN and Transmitter reflectance are normative as well. I would suggest the best approach would be to state that the specification in Table 60-8d are normative for a 1000BASE-PX40 transmitter with the exception of a list of items that are just recommendations, such as RIN15 OMA, rather than separate lists of normative requirements and exceptions which risks an item being missed off.

[2] The PICS should be updated so that items in Table 60-8d that are recommendations, and therefore are not normative, such as RIN15 OMA, are marked with a status of O rather than M. Assuming that RIN15 OMA is the only non-normative item in Table 60-8a the items would be:

Subclause 60.10.4.5c PMD to MDI optical specifications for 1000BASE-PX40-D

Item: PX40D1
Feature: 1000BASE-PX40-D transmitter
Subclause: 60.4b.1
Value/Comment: Meets normative specifications in Table 60-8d
Status: PX40D:M
Support: Yes [ ] N/A [ ]

Item: PX40D2
Feature: 1000BASE-PX40-D transmitter RIN15 OMA
Subclause: 60.4b.1
Value/Comment: Meets the RIN15 OMA specification in Table 60-8d
Status: PX40D:O
Support: Yes [ ] No [ ] N/A [ ]

Renumber subsequent PICS items as required.

Subclause 60.10.4.5d PMD to MDI optical specifications for 1000BASE-PX40-U

Item: PX40U1
Feature: 1000BASE-PX40-U transmitter
Subclause: 60.4b.1
Value/Comment: Meets normative specifications in Table 60-8d
Status: PX40U:M
Support: Yes [ ] N/A [ ]

Item: PX40U2
Feature: 1000BASE-PX40-U transmitter RIN15 OMA
Subclause: 60.4b.1
Value/Comment: Meets the RIN15 OMA specification in Table 60-8d
Status: PX40U:O
Support: Yes [ ] No [ ] N/A [ ]

Renumber subsequent PICS items as required.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the first two sentences of 60.4b.1 as follows:

From:
"The 1000BASE-PX40-D and 1000BASE-PX40-U transmitter's signaling speed, operating wavelength, spectral width, average launch power, extinction ratio, return loss tolerance, OMA, eye and TDP shall meet the specifications defined in Table 60–8d per measurement techniques described in 60.7. Its RIN15OMA should meet the value listed in Table 60–8d per measurement techniques described in 60.7.7"

to

"The 1000BASE-PX40-D and 1000BASE-PX40-U transmitter's specifications described in Table 60-8d are normative requirement, per measurement techniques described in 60.7, with the exception of RIN15OMA which is an optional requirement, per measurement techniques described in 60.7.7."

Change the tables in 60.10.4.5c and 60.10.4.5d per commenter's suggestion.

Similar changes need to be applied to subclauses describing PX10 and PX20 transmitter specifications, as well as associated PICS. Subclause 60.3.1 and 60.4.1, as well as 60.10.4.2, 60.10.4.3, 60.10.4.4, and 60.10.4.5 will be added to D2.1 with appropriate changes.

Cl **60** *SC* **60.4b.2** *P* **31** *L* **44** # 991

Law, David HP

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

Subclause 60.4b.2 'Receiver optical specifications' states that 'The 1000BASE-PX40-D and 1000BASE-PX40-U receiver's signaling speed, operating wavelength, overload, sensitivity, reflectance and signal detect shall meet the specifications defined in Table 60-8e ...' and that 'Its stressed receive characteristics should meet the values listed in Table 60-8e ...' yet footnote b (a footnote to a table is normative) states 'The stressed receiver sensitivity is mandatory' and footnote c states 'Vertical eye closure penalty and the jitter specifications are test conditions for measuring stressed receiver sensitivity. They are not required characteristics of the receiver.'.

Rather than this mix of text and footnotes, with for example footnote b calling out an item as normative that the text states is a recommended value, I suggest that it would be clearer to state that the specification in Table 60-8e are normative for a 1000BASE-PX40 receiver with the exception of a list of items that are just recommendations, and items that are just test conditions.

SuggestedRemedy

[1] Change subclause 60.4b.2 to read 'The 1000BASE-PX40-D and 1000BASE-PX40-U receiver shall meet the specifications defined in Table 60-8e per measurement techniques defined in 60.7.10 with the following exceptions. The Stressed receive sensitivity OMA (max) should meet the value listed in Table 60-8e per measurement techniques described in 60.7.11. Either the damage threshold included in Table 60-8e shall be met, or, the receiver shall be labeled to indicate the maximum optical input power level to which it can be continuously exposed without damage. The vertical eye-closure penalty, the stressed eye jitter, the jitter corner frequency and the sinusoidal jitter limits are test conditions for measuring stressed receiver sensitivity and are not required characteristics of the receiver.'.

[2] Delete footnote b and c.

[3] Make similar changes to subclause 60.4a.2

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Similar changes need to be applied to subclauses describing PX10 and PX20 transmitter specifications, as well as associated PICS. Subclause 60.3.2 and 60.4.2, as well as 60.10.4.2, 60.10.4.3, 60.10.4.4, and 60.10.4.5 will be added to D2.1 with appropriate changes.

Cl **60** *SC* **60.4b.2** *P* **32** *L* **35** # 22

Anslow, Pete Ciena

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

In the bottom row of Table 60-8e "(0.05,0.15)" is missing a space (2 instances).

SuggestedRemedy

Change:
"(0.05,0.15)" to:
"(0.05, 0.15)" in two places.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.5** *P* **32** *L* **47** # 983

Booth, Brad Dell

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

Subclause heading does not need to contain the name of all the ports if the section is applicable to all ports in the Clause heading.

SuggestedRemedy

Shorten to read "Illustrative channels and penalties (informative)".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the title of Subclause 60.5 to "Illustrative 1000BASE-PX channels and penalties (informative)"

Also, change the title of Clause 60 from
"Physical Medium Dependent (PMD) sublayer and medium, type 1000BASE-PX10, 1000BASE-PX20, 1000BASE-PX30, and 1000BASE-PX40 (long wavelength passive optical networks)"
to
"Physical Medium Dependent (PMD) sublayer and medium, type 1000BASE-PX (long wavelength passive optical networks)"

Cl **60** *SC* **60.5** *P* **33** *L* **1** # 984
Booth, Brad Dell

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

Table heading does not need to contain the names of all the ports.

SuggestedRemedy

Shorten table heading to read "Illustrative channel insertion loss and penalties".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change table title to "Illustrative 1000BASE-PX channel insertion loss and penalties".

Cl **60** *SC* **60.5** *P* **33** *L* **9** # 1009
Law, David HP

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

For consistency with Table 60-1, suggest that reference to IEC standard be included for B1.1, B1.3 SMF.

SuggestedRemedy

Change 'B1.1, B1.3 SMF' is changed to read 'IEC 60793-2 B1.1, B1.3 SMF'.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.6** *P* **33** *L* **36** # 986
Booth, Brad Dell

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

Subclause heading does not need to contain all port names.

SuggestedRemedy

Change to read "Jitter at TP1-4 (informative)".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Related comment: #36

Change Subclause title to "Jitter at TP1 to TP4 for 1000BASE-PX (informative)"

Cl **60** *SC* **60.6** *P* **34** *L* **1** # 987
Booth, Brad Dell

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

Tables 60-10 and 60-11 do not need to contain all the port names in the heading.

SuggestedRemedy

Change Table 60-10 heading to be "Downstream jitter budget (informative)" and Table 60-11 heading to be "Upstream jitter budget (informative)".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the titles of Table 60-10 and Table 60-11 to:

"1000BASE-PX downstream jitter budget (informative)"
and
"1000BASE-PX upstream jitter budget (informative)", respectively.

Cl **60** *SC* **60.7.11** *P* **35** *L* **20** # 25
Anslow, Pete Ciena

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

The editing instruction says "Change the text in 60.7.11 as follows:" but only the last sentence of 60.7.11 is shown.

SuggestedRemedy

Change editing instruction to:
"Change the last sentence of 60.7.11 as follows:"

or show all of the text in 60.7.11

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change editing instruction to:
"Change the last sentence of 60.7.11 as follows:"

Cl **60** *SC* **60.7.13.1.1** *P* **35** *L* **45** # 26

Anslow, Pete Ciena

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

The editing instruction mentions the text but not the figure.

SuggestedRemedy

To make this clear, change editing instruction to:
"Change text in 60.7.13.1.1 (make no change to Figure 60-7) as follows:"

Response *Response Status* **C**

REJECT.

The comment has a point, but the current text seems sufficient and will not cause serious problems.

Cl **60** *SC* **60.7.13.1.1** *P* **35** *L* **49** # 40

Trowbridge, Steve Alcatel-Lucent

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

Very strange phrasing for a definition, which should normally put the term being defined as the first word. Also, other timer values in the clause often use a subscripted word after "T" to make it look less like a word ("Ton" actually being a word). Same for 2 following paragraphs for Toff and Treceiver_settling.

SuggestedRemedy

Better phrasing would be:
T<subscript>on</subscript> is the time beginning from ...", or if you really like the word "denoted",
T<subscript>on</subscript> is denoted as the time ..."
I prefer the former.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
"Denote T<subscript>on</subscript> as the time ..."

to

"T<subscript>on</subscript> is denoted as the time ..."

The usage of the fonts (Ton, Toff, Tcdr, Tcode_group_align, and Treceiber_settling) is not consistent in Clauses 64, 65, 75, 76, and 77 in 802.3-2012.
For example, "T<subscript>Receiver_settling</subscript>", "T<subscript>receiver_settling</subscript>" and "Treceiver_settling" exist in 64.3.3.2, 65.2.2.1, 65.3.2.1.2, Table 75-6, Table 75-7, 75.7.15.1, 75.7.14, 76.3.2.5.1, 75.7.15.2, 76.3.2.1.2, 76.4.2.1.1, and 77.3.3.2

Therefore, it should be modified as follows:
First, Clauses 64, 65, 77 and 76 will be added to the next draft of P802.3bk with respective changes shown.

Next, change the text as follows:

"T<subscript>Receiver_settling</subscript>", "T<subscript>receiver_settling</subscript>" and "Treceiver_settling" in 64.3.3.2, 65.2.2.1, 65.3.2.1.2, Table 75-6, Table 75-7, 75.7.15.1, 75.7.14, 76.3.2.5.1, 75.7.15.2, 76.3.2.1.2, 76.4.2.1.1, and 77.3.3.2 are unified into "T<subscript>receiver_settling</subscript>",

"T<subscript>on</subscript>" and "Ton" in 65.3.2.1.2, Table 75-8, Table 75-9, 75.7.14, 75.7.15.2, Figure 76-14, Figure 76-15, 76.4.2.1.1, 77.3.3.1, and 77.3.3.2 are unified into "T<subscript>on</subscript>,

"T<subscript>off</subscript>" and "Toff"
in Table 75-8, Table 75-9, 75.7.14, Figure 76–14, Figure 76–15, 77.3.3.1, and 77.3.3.2 are unified into "T<subscript>off</subscript>",

"T<subscript>code_group_align</subscript>" and "Tcode_group_align"
in 64.3.3.2, 65.3.2.1, 65.3.2.1.1, 65.4.4.8, 75.7.14, and 77.3.3.2 are unified into "T<subscript>code_group_align</subscript>",

"T<subscript>CDR</subscript>" and "Tcdr" in 64.3.3.2, 65.2.2.1, 65.3.2.1, 65.3.2.1.1, 65.3.2.1.2, 65.4.4.8, 75.7.14, 76.3.2.1.2, 76.3.2.5.1, 76.4.2.1, 76.4.2.1.1, and 77.3.3.2 are unified into "T<subscript>CDR</subscript>"

Cl **60** *SC* **60.7.13.2.1** *P* **36** *L* **13** # 1011

Law, David HP

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

Looking at subclause 60.7.13.2.1 'Definitions' in IEEE Std 802.3-2012 the text 'receiver_settling' in 'Treceiver_settling' is subscripted - it appears that the subscripted has been lost in transferring the text to the IEEE P802.3bk draft.

SuggestedRemedy

While this is marked as unchanged text, the text 'receiver_settling' in 'Treceiver_settling' should be subscripted here and elsewhere to restore it to how it is published in IEEE Std 802.3-2012.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #40 resolution.

Cl **60** *SC* **60.7.13.2.2** *P* **36** *L* **21** # 27

Anslow, Pete Ciena

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

The editing instruction says "Change the text in 60.7.13.2.2 as follows:" but only the first paragraph of 60.7.13.2.2 is shown.

SuggestedRemedy

Change editing instruction to:
"Change the first paragraph of 60.7.13.2.2 as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.7.2** *P* *L* # 43

Hajduczenia, Marek ZTE Corporation

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

For the 1000BASE-PX30-D and 1000BASE-PX30-U links, the value of the chromatic dispersion penalty is currently defined as TBD

SuggestedRemedy

Based on calculations following the formula Pdispersion = -10*log10(1-0.5*(pi*B*D)^2), where B = data rate in bit/s, D = dispersion in ps/(nm*km), the following limiting values should be used for 1490 nm transmission wavelength, where dispersion penalty is maximum:
for epsilon = 0.115 for wavelength 1490nm: 1.85 dB (10 km)
for epsilon = 0.100 for wavelength 1490nm: 1.39 dB (20 km)
for epsilon = 0.080 for wavelength 1490nm: 0.89 dB (20 km)
Current limits for epsilon 0.115 is set to 2dB, for epsilon 0.100 - to 1.5 dB and for epsilon 0.08, the limit should be set to at least 0.9 dB.

Response *Response Status* **C**

ACCEPT.

Change "TBD dB" to "0.9 dB" in 60.7.2.

Cl **60** *SC* **60.7.2** *P* **34** *L* **41** # 23

Anslow, Pete Ciena

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

The editing instruction says "Change the text in 60.7.2 as follows:" but only the last two paragraphs of 60.7.2 are shown as changed.

SuggestedRemedy

Change editing instruction to:
"Change the last two paragraphs of 60.7.2 as follows:"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Show whole the text described in 60.7.2 since it will be better for the readers to understand the material in 60.7.2. No change is made to the editing instruction.

Cl **60** *SC* **60.7.2** *P* **34** *L* **45** # 42

Hajduczenia, Marek — ZTE Corporation

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

The "epsylon" symbol in line 45 is bolded for some reason. Remove the bolding of this symbol. Same in line 46.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.7.2** *P* **35** *L* **1** # 1008

Law, David — HP

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

The editors note is not in the correct format.

SuggestedRemedy

Update to correct format - see page 3, line 3 through 11 for an example.

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.7.2** *P* **35** *L* **4** # 1010

Law, David — HP

Comment Type **E** *Comment Status* **R** *Title of Table 60-8b*

Suggest that 'For the 1000BASE-PX30-D and 1000BASE-PX30-U links ...' should be changed to read 'For 1000BASE-PX30 links ...' to match the title of Table 60-8b.

SuggestedRemedy

See comment.

Response *Response Status* **C**

REJECT.

The title of Table 60-8b is incorrect, and it should be "1000BASE-PX30-U transmitter spectral limits"

See #13 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **5** # 39

Trowbridge, Steve — Alcatel-Lucent

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

Better to refer to the column header and not to the "middle column" of table 60-8b in case the structure of that table changes in the future.

SuggestedRemedy

Change reference to be "the RMS spectral width column of table 60-8b"

Response *Response Status* **C**

REJECT.

This comment is reasonable, but it (proposed change) will be fine if such table change takes place in the future as the commenter suggests.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 996

Law, David — HP

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

The text reads '... the chromatic dispersion penalty is expected to be below TBD dB when ...'.

SuggestedRemedy

Replace the TBD with a value.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 2

Ran, Adee — Intel

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

"chromatic dispersion penalty is expected to be below TBD dB"

SuggestedRemedy

Change TBD to an appropriate value.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 24

Anslow, Pete — Ciena

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

This says "... the chromatic dispersion penalty is expected to be below TBD dB ..."
The "TBD" needs to be changed to a number

SuggestedRemedy

Replace the "TBD" with an appropriate value.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 998

Tim Brophy — Cisco systems

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

There is a TBD on the expected dispersion penalty; since the value is determined by line widths that are informative values only (from table 60-8b) I am uncertain how to put a quantitative value here, or how it is obtained.

SuggestedRemedy

follow whatever technique was used as described in lines 9 & 10 in the same section for the –10 and –20 versions and fill in the number

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 999

Moore, Charles — Avago Technologies

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

I cannot vote for this draft, it is technically incomplete, expected chromatic dispersion penalty for 1000BASE-PX30-D and 1000BASE-PX30-U is TBD.

SuggestedRemedy

change TBD to 1.2

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 6

Powell, Bill — Alcatel-Lucent

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

Need to specify a value for "TBD" chromatic dispersion

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.7.2** *P* **35** *L* **6** # 7

Slavick, Jeff — Avago Technologies

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

TBD needs to be replaced with a vlue.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #43 resolution.

Cl **60** *SC* **60.8.2** *P* **36** *L* **31** # 28

Anslow, Pete — Ciena

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

The editing instruction says "Change text in 60.8.2 as follows:" but only the first paragraph of 60.8.2 is shown.

SuggestedRemedy

Change editing instruction to:
"Change the first paragraph of 60.8.2 as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **60.9.2** *P* **36** *L* **46** # 1012

Law, David HP

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

Existing text in this subclause reads '... fibers specified in IEC 60793-2 Type B1.1 (dispersion un-shifted single-mode fiber) and Type B1.3 (low water peak single-mode fiber) ...' yet new text reads '... IEC 60793-2 Type B1.1 (dispersion un-shifted SMF) and Type B1.3 (low water peak SMF), ITU-T G.652 and ITU-T G.657 (bend-insensitive SMF) ...' hence in some cases 'single-mode fiber' is used and in some cases 'SMF' is used.

SuggestedRemedy

Consistently use either 'single-mode fiber' or 'SMF'.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Term "SMF" in 60.9.2 is changed to "single-mode fiber". Entire text is changed as follows:

In 60.9.2, change the text from
"The fiber optic cable requirements for 1000BASE-PX10 and 1000BASE-PX20 are satisfied by the fibers specified in IEC 60793-2 Type B1.1 (dispersion un-shifted single-mode fiber) and Type B1.3 (low water peak single-mode fiber) and ITU G.652, or by the requirements of Table 60–14 where they differ.
The fiber optic cable requirements for 1000BASE-PX30 and 1000BASE-PX40 are satisfied by the fibers specified in IEC 60793–2 Type B1.1 (dispersion un–shifted SMF) and Type B1.3 (low water peak SMF), ITU–T G.652 and ITU–T G.657 (bend–insensitive SMF), or by the requirements of Table 75–14 where they differ."

to

"The fiber optic cable requirements for 1000BASE-PX10 and 1000BASE-PX20 are satisfied by the fibers specified in IEC 60793-2 Type B1.1 (dispersion un-shifted single-mode fiber) and Type B1.3 (low water peak single-mode fiber) and ITU G.652, or by the requirements of Table 60–14 where they differ.
The fiber optic cable requirements for 1000BASE-PX30 and 1000BASE-PX40 are satisfied by the fibers specified in IEC 60793–2 Type B1.1 (dispersion un–shifted single-mode fiber), Type B1.3 (low water peak single-mode fiber), ITU–T G.652 and ITU–T G.657 (bend–insensitive single-mode fiber), or by the requirements of Table 75–14 where they differ."

Cl **60** *SC* **60.9.2** *P* **36** *L* **50** # 1013

Law, David HP

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

Typo.

SuggestedRemedy

Suggest that '... in IEC 60793–2 Type B1.1 (dispersion un–shifted SMF) and Type B1.3 (low water peak SMF), ITU–T G.652 and ITU–T G.657 ...' should read '... in IEC 60793–2 Type B1.1 (dispersion un–shifted SMF), Type B1.3 (low water peak SMF), ITU–T G.652 and ITU–T G.657 ...' (first and replaced with a comma).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #1012 resolution.

Cl **60** *SC* **60.9.2** *P* **36** *L* **51** # 1015

Law, David HP

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

The second paragraph of subclause 60.9.2 states 'The fiber optic cable requirements for 1000BASE-PX30 and 1000BASE-PX40 are satisfied by the fibers specified in ... or by the requirements of Table 75-14 where they differ.' however subclause 60.4a states 'A 1000BASE-PX30 compliant transceiver supports all media types listed in Table 60-14 ...' and subclause 60.4b states 'A 1000BASE-PX40 compliant transceiver supports all media types listed in Table 60-14 ...'.

Is the reference to Table 75-14 in subclause 60.9.2 correct, or should it be to Table 60-14 as subclause 60.4a and 60.4ab seem to indicate?

SuggestedRemedy

Change '... of Table 75-14 where they ...' to read '... of Table 60-14 where they ...'.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Terms "Table 60-14" and "60.9" in 60.4a and 60.4b are changed to "Table 75-14" and "75.9", respectively.

Cl **60** *SC* **60.9.3** *P* **36** *L* **54** # 29

Anslow, Pete Ciena

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

The editing instruction says "Change text in 60.9.3 as follows:" but only the last sentence of 60.9.3 is shown.

SuggestedRemedy

Change editing instruction to:
"Change the last sentence of 60.8.3 as follows:"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See resolution #1040 resolution.
(Remove 60.9.3 from draft, backing off any changes to this subclaus.)

Cl **60** *SC* **60.9.3** *P* **37** *L* **3** # 1040

Kramer, Glen Broadcom

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

In text "Other arrangements, such as a shorter link length and a higher split ratio in the case of 1000BASE-PX20, 1000BASE-PX30, and 1000BASE-PX40, may be used provided the requirements of Table 60–1 are met", why is 1000BASE-PX10 excuded?

SuggestedRemedy

If other arrangements are possible for 1000BASE-PX10, add it here. Otherwise, explain why other arrangements are not possible for this PMD.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The original text in 802.3-2012 reads:

For example, this allocation supports three connections with an average insertion loss equal to 0.5 dB (or less) per connection, or two connections with a maximum insertion loss of 0.75 dB. Other arrangements, such as a shorter link length and a higher split ratio in the case of 1000BASE-PX20, may be used provided the requirements of Table 60–1 are met.

This text was originally intended as just an example for PX20 and should remain as such.

Remove 60.9.3 from draft, backing off any changes to this subclause.

Cl **60** *SC* **60.9.4** *P* **37** *L* **6** # 30

Anslow, Pete Ciena

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

The editing instruction says "Change text in 60.9.4 as follows:" but only the first and third paragraph of 60.9.4 are shown.

SuggestedRemedy

Show all of the text of 60.9.4

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **Table 60-8b** *P* **28** *L* **44** # 11

Winkel, Ludwig Siemens AG

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

text Style should not be bold

SuggestedRemedy

Assign normal Table cell style

Response *Response Status* **C**

ACCEPT.

Cl **60** *SC* **Table 60-8b** *P* **29** *L* **12** # 12

Winkel, Ludwig Siemens AG

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

What does the empty line means? Is there something missing?

SuggestedRemedy

Either delete empty line or fill it with ... or similar to show that it is intentionally there

Response *Response Status* **C**

REJECT.

Related comment: #21.

Blank row remains as is. The blank row in Table 60-8b matches that used in Tables 59-4, 60-4 and 60-7 of IEEE Std 802.3-2012. Replacing the blank row with a thick line in all of these tables would be more appropriate to a revision of the base standard 802.3.

Cl **60** *SC* **Table 60-8b** *P* **29** *L* **2** # 10

Winkel, Ludwig — Siemens AG

Comment Type **E** *Comment Status* **A** *Table 60-8b title*

Header repeat missing

SuggestedRemedy

Table Header to be repeated on 2nd page.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #21 resolution.

Cl **75** *SC* **75.10.3** *P* **54** *L* **33** # 34

Anslow, Pete — Ciena

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

The table should have a bottom ruling and reducing the number of orphan rows from 10 to something more reasonable like 5 would look better.

SuggestedRemedy

Uncheck "Draw Bottom Ruling on Last Sheet Only" in Table designer
Reduce the number of Orphan Rows to 5

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.10.4.12a** *P* **57** *L* **25** # 1022

Law, David — HP

Comment Type **T** *Comment Status* **A** *C75 PICS*

The status column should use a Major capability/option item defined in subclause 75.10.3 to predicate if an item is Mandatory or Option in the subsequent PICS tables. As such all the item in the table in subclause 75.10.4.12a 'PMD to MDI optical specifications for 10/1GBASE–PRX–U4' should be predicated on PRX40U (see page 55, line 20).

SuggestedRemedy

[1] Change PRXU4F1:M to read PRX40U:M
[2] Change PRXU4F2:M to read PRX40U:M
[3] Change PRXU4F3:O to read PRX40U:O
[4] Change PRXU4F4:M to read PRX40U:M

Response *Response Status* **C**

ACCEPT.

See #1019 resolution.

Cl **75** *SC* **75.10.4.4a** *P* **56** *L* **12** # 1019

Law, David — HP

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

The status column should use a Major capability/option item defined in subclause 75.10.3 to predicate if an item is Mandatory or Option in the subsequent PICS tables. As such all the item in the table in subclause 75.10.4.4a 'PMD to MDI optical specifications for 10GBASE-PR-D4' should be predicated on PR40D (see page 55, line 3).

SuggestedRemedy

[1] Change PRD4F1:M to read PR40D:M
[2] Change PRD4F2:M to read PR40D:M
[3] Change PRD4F3:O to read PR40D:O (if not deleted due to my other comment)
[4] Change PRD4F4:M to read PR40D:M

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Also, delete PRD4F3 in 75.10.4.4a.

Supplementary file: "8023bk_1301_nishihara_3.pdf"

Related comment: #1018

Cl **75** *SC* **75.10.4.4a** *P* **56** *L* **17** # 1018

Law, David — HP

Comment Type **T** *Comment Status* **A** *C75 PICS*

With respect to PICS item PRD4F3, footnote c to Table 75-6 states that 'The stressed receiver sensitivity is mandatory' so this item needs to be marked as status 'M'. As such it is already covered by PICS item PRD4F2 above, and therefore this item can be deleted.

SuggestedRemedy

Delete item PRD4F3.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #1019 resolution.

Cl **75** *SC* **75.10.4.7a** *P* **56** *L* **26** # 1020

Law, David HP

Comment Type **T** *Comment Status* **A** *C75 PICS*

The status column should use a Major capability/option item defined in subclause 75.10.3 to predicate if an item is Mandatory or Option in the subsequent PICS tables. As such all the item in the table in subclause 75.10.4.7a 'PMD to MDI optical specifications for 10/1GBASE–PRX–D4' should be predicated on PRX40D (see page 55, line 22).

SuggestedRemedy

[1] Change PRXD4F1:M to read PRX40D:M
[2] Change PRXD4F2:M to read PRX40D:M
[3] Change PRXD4F3:O to read PRX40D:O
[4] Change PRXD4F4:M to read PRX40D:M

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #1019 resolution.

Cl **75** *SC* **75.10.4.7a** *P* **56** *L* **31** # 1035

Ganga, Ilango Intel

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

Fix typo first row of table: PXR-D4 to PRX-D4

SuggestedRemedy

As per comment

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.10.4.7a** *P* **56** *L* **36** # 1023

Law, David HP

Comment Type **T** *Comment Status* **A** *C75 PICS*

With respect to PICS item PRXD4F3, footnote b to Table 60-8e (which Table 75-7 referenced in the PICS redirects to) states that 'The stressed receiver sensitivity is mandatory' so this item needs to be marked as status 'M'. If this is correct, it is already covered by PICS item PRXD4F2 above, and therefore this item can be deleted.

SuggestedRemedy

Delete item PRXD4F3.

Response *Response Status* **C**

ACCEPT.

See #1019 resolution.

Cl **75** *SC* **75.10.4.9a** *P* **57** *L* **10** # 1025

Law, David HP

Comment Type **T** *Comment Status* **A** *C75 PICS*

With respect to PICS item PRU4F3, footnote c to Table 75-11 states that 'The stressed receiver sensitivity is mandatory over the entire PR–D transmitter compliance region, as illustrated in Figure 75–1.' so it seems this item needs to be marked as status 'M'. As such it is already covered by PICS item PRU4F2 above, and therefore this item can be deleted.

SuggestedRemedy

Delete item PRU4F3.

Response *Response Status* **C**

ACCEPT.

See #1019 resolution.

Cl **75** *SC* **75.10.4.9a** *P* **57** *L* **6** # 1021

Law, David HP

Comment Type **T** *Comment Status* **A** *C75 PICS*

The status column should use a Major capability/option item defined in subclause 75.10.3 to predicate if an item is Mandatory or Option in the subsequent PICS tables. As such all the item in the table in subclause 75.10.4.9a 'PMD to MDI optical specifications for 10GBASE–PR–U4' should be predicated on PR40U (see page 54, line 32).

SuggestedRemedy

[1] Change PRU4F1:M to read PR40U:M
[2] Change PRU4F2:M to read PR40U:M
[3] Change PRU4F3:O to read PR40U:O (if not deleted due to my other comment)
[4] Change PRU4F4:M to read PR40U:M

Response *Response Status* **C**

ACCEPT.

See #1019 resolution.

Cl **75** *SC* **75.4.1** *P* **45** *L* **20** # 1034

Ganga, Ilango — Intel

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

Some of the row in Tables 75-5, 75-6, 75-8 and 75-11 have been reformatted (values in columns combined). Underline those rows that have been changed from the base document.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REJECT.

Value itself is not changed.

Cl **75** *SC* **75.4.1** *P* **45** *L* **31** # 31

Anslow, Pete — Ciena

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

In the Extinction ratio row of Table 75-5 "6" is shown in underline font, but this value has not been inserted (only the format of the row has been changed with the two cells merged)

SuggestedRemedy

Do not show in underline font as this value has not been inserted.

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.4.1** *P* **45** *L* **49** # 1027

Law, David — HP

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

Footnote b to Table 75-5 reads 'Minimum average launch power and minimum launch OMA are valid for ER = 9 dB (see Figure 75–1 for details)' however IEEE Std 802.3-2012 Figure 75-1 is 'Relationship of 10/10G-EPON P2MP PMD to the ISO/IEC OSI reference model and the IEEE 802.3 CSMA/CD LAN model'. Looking at IEEE Std 802.3-2012, footnote b to Table 75-5 (see page 577) references Figure 75-4 which is 'Graphical representation of region of PR-D type transmitter compliance' which seems to be the correct figure, and I assume the change found in the IEEE P802.3bk draft is not intended especially since it is not marked as changed text.

Similarly footnote c related to the transmitter eye mask definition states 'As defined in Figure 75-5', however IEEE Std 802.3-2012 Figure 75-5 is '10/1GBASE-PRX-U3 transmitter spectral limits' and instead Figure 75-8 'Transmitter eye mask definition for downstream direction of 10/1GBASE-PRX PMD and both directions of 10GBASE-PR PMD', as IEEE Std 802.3-2012, footnote c to Table 75-5 references, would seem to be the correct figure.

SuggestedRemedy

In footnote b change '... (see Figure 75–1 for details)' to read '... (see Figure 75–4 for details)' and in footnote c change 'As defined in Figure 75–5.' to read 'As defined in Figure 75–8.'.

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.5.1** *P* **48** *L* **31** # 1028

Law, David HP

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

Footnote b to Table 75-8 reads 'Minimum average launch power and minimum launch OMA are valid for ER = 6 dB (see Figure 75-2 for details).' however IEEE Std 802.3-2012 Figure 75-2 is Relationship of 10/1G-EPON P2MP PMD to the ISO/IEC OSI reference model and the IEEE 802.3 CSMA/CD LAN model'. Looking at IEEE Std 802.3-2012, footnote b to Table 75-8 (see page 581) references Figure 75-5 which is '10/1GBASE-PRX-U3 transmitter spectral limits' which seems to be the correct figure, and I assume the change found in the IEEE P802.3bk draft is not intended especially since it is not marked as changed text.

Similarly footnote c related to the transmitter eye mask definition states 'As defined in Figure 75-5', however IEEE Std 802.3-2012 Figure 75-5 is '10/1GBASE-PRX-U3 transmitter spectral limits' and instead Figure 75-8 'Transmitter eye mask definition for downstream direction of 10/1GBASE-PRX PMD and both directions of 10GBASE-PR PMD', as IEEE Std 802.3-2012, footnote c to Table 75-8 references, would seem to be the correct figure.

SuggestedRemedy

In footnote b change '... (see Figure 75–2 for details)' to read '... (see Figure 75–5 for details)' and in footnote c change 'As defined in Figure 75–5.' to read 'As defined in Figure 75–8.'.

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.5.1** *P* **49** *L* **39** # 993

Law, David HP

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

The parameters contained in column 3 '10/1GBASE-PRX-U3' of Table 75-9 are replaced with a reference to Table 60-8a. Since Table 60-8a contains an additional parameter, 'Optical return loss of ODN (min)' compared to Table 75-9, this change seems to impose an additional parameter upon existing 10/1GBASE-PRX-U3 transmitters.

SuggestedRemedy

If it is intended to add this additional parameter to 10/1GBASE-PRX-U3 transmitters then no remedy is necessary. If this is not the intention then Table 60-8a should be changed to not impose this extra requirement on 10/1GBASE-PRX-U3 transmitters.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the title of "Receive parameters" in Table 75-9 to "Transmit parameters.
Put a superscript "a" to "Transmit parameters" column. Also, add a following footnote in Table75-9:

"<superscript>a</superscript> Optical return loss of ODN (min) is informative for 10/1GBASE–PRX–U1, 10/1GBASE–PRX–U2, 10/1GBASE–PRX–U3, and 10/1GBASE–PRX–U4 PMDs.

Supplementary file: "8023bk_1301_nishihara_2.pdf"

Cl **75** *SC* **75.5.1** *P* **49** *L* **9** # 992

Law, David HP

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

The parameters contained in column 3 '10/1GBASE-PRX-U3' of Table 75-9 are replaced with a reference to Table 60-8a. The existing value for 'RMS spectral width (max)' in Table 75-9 reads 'see^b' where footnote b (a footnote to a table is normative) states 'If the transmitter employs a Fabry-Perot laser, the RMS spectral width shall comply with Table 75-10. If the transmitter employs a DFB laser, the side mode suppression ratio (min) shall be 30 dB.'. The equivalent parameter in Table 60-8a simply reads 'see Table 60-8b'. This would seem to be a normative change in respect to RMS spectral width (max) for 10/1GBASE-PRX-U3 transmitters, before if a Fabry-Perot laser is used the RMS spectral width of Table 75-10 (now Table 60-8b which has the same values has to be met), if a DFB laser is used the side mode suppression ratio (min) has to be 30 dB. Now it seems, regardless of laser type, the RMS spectral width of Table 60-8b has to be met and any side mode suppression ratio constraint is removed.

SuggestedRemedy

If it is intended to remove any side mode suppression ratio constraint, and only use a RMS spectral width requirement on 10/1GBASE-PRX-U3 transmitters in the future, then no remedy is necessary. If this is not the intention then the constraints imposed by footnote b of Table 75-9 for 10/1GBASE-PRX-U3 transmitters should be restored.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Modify Table 60-8a by newly adding Side Mode Supression Ratio with the value of 30 dB. Put footnotes "c" to columns "Side Mode Supression Ratio" and "RMS spectral width (max)".
Add a footnote "c" with the description "If 1000BASE-PX30-U PMD employs a DFB laser, Side Mode Suppression Ratio is mandatory. If it employs a Fabry-Perot laser, RMS spectral width requirement is mandatory."

Cl **75** *SC* **75.5.2** *P* **52** *L* **16** # 1026

Law, David HP

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

Footnote c to Table 75-11 reads 'The stressed receiver sensitivity is mandatory over the entire PR-D transmitter compliance region, as illustrated in Figure 75-1.' however IEEE Std 802.3-2012 Figure 75-1 is 'Relationship of 10/10G-EPON P2MP PMD to the ISO/IEC OSI reference model and the IEEE 802.3 CSMA/CD LAN model'. Looking at IEEE Std 802.3-2012, footnote c to Table 75-11 (see page 585) references Figure 75-4 which is 'Graphical representation of region of PR-D type transmitter compliance' which seems to be the correct figure, and I assume the change found in the IEEE P802.3bk draft is not intended especially since it is not marked as changed text.

SuggestedRemedy

Change '... as illustrated in Figure 75-1.' to read '... as illustrated in Figure 75-4.'.

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.6.2** *P* **52** *L* **39** # 1017

Law, David HP

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

The end of the second sentence reads '... and in Table 60-5, Table 60-8, Table 60-8d, and Table 60-8e (1000BASE-PX-D receive characteristics).' Tables 60-5, 60-8 and 60-8e all contain receive characteristics however Table 60-8d contains 1000BASE-PX40 transmit characteristics. Suggest the reference to Table 60-8d should be to Table 60-8c '1000BASE-PX30-D and 1000BASE-PX30-U receive characteristics'.

SuggestedRemedy

Change '... and in Table 60-5, Table 60-8, Table 60-8d, and Table 60-8e ...' to read '... and in Table 60-5, Table 60-8, Table 60-8c, and Table 60-8e ...'.

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.7.15.1** *P* **53** *L* **11** # 41

Trowbridge, Steve — Alcatel-Lucent

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

"Denote" is very strange phrasing for a defiinition, which should normally start with the term being defined.

SuggestedRemedy

Suggest:
T<subscript>receiver_settling</subscript> is the time beginning from ..."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change

"Denote T<subscript>receiver_settling</subscript> is the time beginning from …"

to

"T<subscript>receiver_settling</subscript> is denoted as the time beginning from …"

Also see #40 resolution.

Cl **75** *SC* **75.7.15.1** *P* **53** *L* **16** # 1029

Law, David — HP

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

It is stated in this subclause that 'Treceiver_settling is presented in Figure 75-6' however Figure 75-6 is '10/1GBASE-PRX-U3 transmitter spectral limits' and is being deleted by this amendment. Looking at this subclause in IEEE Std 802.3-2012 (see page 590) the reference is to Figure 75-9 which is 'Receiver settling time measurement setup' which seems to be the correct figure, and I assume the change found in the IEEE P802.3bk draft is not intended especially since it is not marked as changed text.

SuggestedRemedy

Change 'Treceiver_settling is presented in Figure 75-6' to read 'Treceiver_settling is presented in Figure 75-9'. Make a similar change in subclause 75.7.15.2 'Test specification' (page 53, line 25).

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.7.15.2** *P* **53** *L* **22** # 32

Anslow, Pete — Ciena

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

The editing instruction says "Change the text of 75.7.15.2 as shown below:" but only the first paragraph of 75.7.15.2 is shown.

SuggestedRemedy

Change editing instruction to:
"Change the first paragraph of 75.7.15.2 as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **75** *SC* **75.8.5** *P* **53** *L* **34** # 33

Anslow, Pete — Ciena

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

The editing instruction says "Change the text of 75.8.5 as shown below:" but the last sentence of 75.8.5 is not shown.

SuggestedRemedy

Show the last sentence of 75.8.5

Response *Response Status* **C**

ACCEPT.

Add the following sentence at the current text in 75.8.5:

"Each field-pluggable component shall be clearly labeled with its operating temperature range over which compliance is ensured."

Cl **75A** *SC* **75A.1** *P* **59** *L* **21** # 1

Ran, Adee — Intel

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

modified text includes:
"the PMD layer does not have the a prior knowledge"

SuggestedRemedy

remove the article "a"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #35 resolution.

Cl **75A** SC **75A.1** P **59** L **21** # 35

Anslow, Pete — Ciena

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

The text of the second paragraph has been changed from:
"In general, the PMD layer does not have the a priori knowledge of which" to:
"In general, the PMD layer does not have the a prior knowledge of which", which no longer makes sense.
Also, make the change from "priori" to "prior" more obvious by showing "priori" in strikethrough and "prior" in underline.

SuggestedRemedy

Change:
"In general, the PMD layer does not have the a priori knowledge of which" to:
"In general, the PMD layer does not have prior knowledge of which"
by showing "the a priori" in strikethrough font and "prior" in underline font.

Response *Response Status* **C**

ACCEPT.

Cl **75A** SC **75A.1** P **59** L **33** # 1041

Kramer, Glen — Broadcom

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

"...and also those of 10/1GBASE–PRX–D1 and 10/1GBASE–PRX–D2 in Table 75–5 cannot be applied..."

What about PRX-D3 and PRX-D4 also listed in Table 75-5?

SuggestedRemedy

Add missing PMDs to the list

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "10/1GBASE–PRX–D1 and 10/1GBASE–PRX–D2 in Table 75–5" to read "10/1GBASE–PRX–D1, 10/1GBASE–PRX–D2, 10/1GBASE–PRX–D3, and 10/1GBASE–PRX–D4 in Table 75–5" using proper formatting

---

Cl **75A** SC **75A.1** P **59** L **8** # 14

Mark, Laubach — Broadcom Corporation

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

There are no changes indicated for the sixth paragraph text in lines 21-27. Also, checking against to Std 802.3av-2009, same text for sixth paragraph.

SuggestedRemedy

Indicate what is changed, or only change the third and seventh paragraphs.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #35 resolution.

Cl **75B** SC **2.1** P **61** L **30** # 1004

Remein, Duane — Futurewei Technologie

Comment Type **E** *Comment Status* **A** *DS/US, footnote a*

The table would be more readable if note "a" was referenced to thetable title rather than each entry of US/DS. Comment also applies to Table 75B-2 (pg 62)

SuggestedRemedy

See Table 56-3 for an example of how you've done this before.

Response *Response Status* **C**

ACCEPT.

Related comment: #1007

Cl **75B** *SC* **75B** *P* **61** *L* **1** # 988

Booth, Brad — Dell

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

Heading does not match format used in IEEE Std. 802.3-2012. Title could also be greatly simplified.

SuggestedRemedy

Change to read:
Annex 75B
(informative)
Illustrative channels and penalties for 10GBASE-PR and 10/1GBASE-PRX power budget classes

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the Annex title to "Annex 75B (informative) Illustrative channels and penalties for 10GBASE-PR and 10/1GBASE-PRX power budget classes" and align the style with published Annex 75B in 802.3-2012:

Annex 75B [paragraph tag AN,Annex]
(informative) [paragraph tag I,Informative]
Illustrative channels … [paragraph tag AT,AnnexTitle

Strike the text "(informative)" just one line below the editing instruction "Change the title of Annex 75B as shown above:"

Cl **75B** *SC* **75B.2.1** *P* **61** *L* **32** # 1036

Ganga, Ilango — Intel

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

Check and add IEC 60793–2 B1.1, B1.3 SMF and ITU–T G.652, G.657 SMF to references 1.3 and Annex A as appropriate

SuggestedRemedy

As per comment

Response *Response Status* **C**

REJECT.

It is already described in 1.3 of IEEE Std 802.3-2012 as follows:

==
IEC 60793-2:1992, Optical fibres—Part 2: Product specifications.

IEC 60793-2-50:2008, Optical fibres—Part 2-50: Product specifications—Sectional specification for class B single-mode fibres.

ITU-T Recommendation G.652, 2009—Characteristics of a single-mode optical fibre and cable.
ITU-T Recommendation G.657, 2009—Characteristics of a bending-loss insensitive single-mode optical fibre and cable for the access network.
==

Cl **75B** *SC* **75B.2.1** *P* **61** *L* **48** # 1037

Ganga, Ilango — Intel

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

There is no change to the last row of Tables 75B-1 and 75B-2. So remove underlining of contents to this row.

SuggestedRemedy

As per comment

Response *Response Status* **C**

ACCEPT.

Cl **75B** *SC* **75B.2.2** *P* **63** *L* **10** # 1042

Kramer, Glen — Broadcom

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

In D2.0, the original text "The two wavelength bands overlap, thus WDM channel multiplexing cannot be used to separate the two data rates."

is replaced with a new text: "The 1260-1360 wavelength band and the 1260-1280 wavelength band overlap, thus WDM channel multiplexing cannot be used to separate the two data rates for 1000BASE-PX10-U, 1000BASE-PX20-U, 1000BASE-PX30-U compliant ONUs and 10/1GBASE-PRX-U1, 10/1GBASE-PRX-U2, 10/1GBASE-PRX-U3 compliant ONUs."

The new text is incorrect, as it seems to state that separation of upstream 1Gb/s in PX link and 1Gb/s in RPX links are needed. This is not the case. The "two data rates" in the original text refered to upstream 1Gb/s (which includes PX and PRX PMDs) and 10Gb/s (in PR PMD) channels.

SuggestedRemedy

Delete the new text and restore the original sentence

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In P802.3bk D2.0, there are three wavelength bands for upstream:
[1] 1260 - 1360 nm for PX10, PX20, PX30, PRX10, PRX20, PRX30
[2] 1260 - 1280 nm for all 10G upstream
[3] 1290 - 1330 nm for PX40 ad PRX40

While separation between [1] and [2] is not possible based on WDM, and this what the text currently says, WDM separation between [2] and [3] is technically possible. Stating that WDM separation between 1G and 10G upstream links is not possible, would be therefore not applicable to PX40/PRX40 and PR40 links.

An alternative text "The 1260-1360 wavelength band and the 1260-1280 wavelength band overlap, thus WDM channel multiplexing cannot be used to separate the 1G upstream links operating in 1260-1360 wavelength band from 10G upstream links operating in 1260-1280 wavelength band."

Cl **75C** *SC* **75C** *P* **65** *L* **1** # 989

Booth, Brad — Dell

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

Heading does not match format used in IEEE Std. 802.3-2012. Title could also be greatly simplified.

SuggestedRemedy

Change to read:
Annex 75C
(informative)
Jitter at TP1-8 for 10GBASE-PR and 10/1GBASE-PRX

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the Annex title to "Annex 75C (informative) Jitter at TP1 to TP8 for 10GBASE-PR and 10/1GBASE-PRX" and align the style with published Annex 75C in 802.3-2012:

Annex 75C [paragraph tag AN,Annex]
(informative) [paragraph tag I,Informative]
Jitter at … [paragraph tag AT,AnnexTitle

Strike the text "(informative)" just one line below the editing instruction "Change the title of Annex 75C as shown above:"

Related comment: #36

Cl **75C** *SC* **75C** *P* **65** *L* **1** # 36

Anslow, Pete — Ciena

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

The title of Annex 75C contains "at TP1-TP8" which is not in accordance with the style manual which includes:
"Ranges should repeat the unit (e.g., 115 V to 125 V). Dashes should never be used because they can be misconstrued as subtraction signs."

SuggestedRemedy

In the title of Annex 75C change "at TP1-TP8" to "at TP1 to TP8"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See #989 resolution.

Cl **75C** *SC* **75C.1** *P* **65** *L* **38** # 1038

Ganga, Ilango
Intel

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

Add missing cross reference to Equation(75C–1)

SuggestedRemedy

As per comment

Response *Response Status* **C**

ACCEPT.