Cl **00** *SC* **0** *P* *L* # 84

Anslow, Pete Ciena

Comment Type **ER** *Comment Status* **D**

The draft should contain the usual description of the editing instructions after the contents section:

"NOTE—The editing instructions contained in this amendment define how to merge the material contained therein into the existing base standard and its amendments to form the comprehensive standard.
The editing instructions are shown in bold italic. Four editing instructions are used: change, delete, insert, and replace. Change is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed by using strikethrough (to remove old material) and underscore (to add new material). Delete removes existing material. Insert adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. Replace is used to make changes in figures or equations by removing the existing figure or equation and replacing it with a new one. Editing instructions, change markings, and this NOTE will not be carried over into future editions because the changes will be incorporated into the base standard."

Unless it is agreed with IEEE staff that the published amendment will use color to indicate changes for the "Change" instruction, then the usual black strikethrough (to remove old material) and black underscore (to add new material) should be used. For the delete, insert, and replace instructions the text should be normal black.
If something different is used for the drafts without agreement from IEEE staff, then it is likely that a very large number of changes will have to be made during the publication process which will cause delay and is likely to introduce errors. The current scheme will also be very confusing when changes to the draft are reviewed using diff marked drafts.

Having added this section, go through the entire draft making sure that each modification has an editing instruction and that the style used for the text matches that described for that type of change.

Examples of modifications without an editing instruction in D 1.0 are:
45.2.1.11
The title of Clause 60
The title of Annex 75B
The title of Annex 75C

SuggestedRemedy

Add a description of the editing instructions used in the draft amendment after the contents section. Unless agreed otherwise with IEEE staff, this should be the same as used for previous IEEE 802.3 amendments.

Go through the rest of the draft ensuring that only change, delete, insert, or replace are used, that each modification has a corresponding editing instruction and that the text corresponding to each instruction matches the style in the added description.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** *SC* **0** *P* *L* # 85

Anslow, Pete Ciena

Comment Type **ER** *Comment Status* **D**

The draft does not use the same numbering convention as previous IEEE 802.3 amendments. The convention is:

Where a subclause is inserted prior to the existing first subclause it is labelled [existing subclause - one level].[a through z]. Where a subclause is inserted after an existing subclause - assuming it is not the last - the new subclause it is labelled [subclause number][a through z].
For example to insert two subclauses before 43.2.1 the subclauses would be numbered 43.2.a and 43.2.b. Two subclauses between 43.2.1 and 43.2.2 would be numbered 43.2.1a and 43.2.1b. Two subclauses added after the last subclause 43.2.2 would be numbered 43.2.3 and 43.2.4.

The first example of this is the insertion of text for registers 1.12.11 through 1.12.14 in Clause 45. To be consistent with the existing Clause 45 these should be inserted above 45.2.1.11.1, so using the scheme quoted above they should be numbered 45.2.1.11.a through 45.2.1.11.d. To make this clear, the editing instruction should also include the location of the insertion. For this case it should be:
Insert 45.2.1.11.a through 45.2.1.11.d before 45.2.1.11.1 as follows:

The unmodified text of 45.2.1.11.1 through 45.2.1.11.11 should not be shown as it has not been changed.

SuggestedRemedy

Modify the numbering throughout the draft according to the scheme quoted above.
Include the location of the insertion in each "Insert" editing instruction.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **00**
SC **0**

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Cl **00**   *SC* **0**   *P* **1**   *L* **1**   # 75
Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **D**
While the efforts of the Editor are VERY laudable it should be noted that a large majority of the text in D1.0 does not represent material submitted as baseline before the TF. All materail initiated by the Editor should be marked as Tentative and should remain open for review by the TF.

SuggestedRemedy
Per comment, identify all text not approved as baseline by the TF and leave open for review in the next draft at a minimum.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.
Commenter's cooperation would be much appreciated if he explicitly and kindly let the Editor know where such descriptions are. Also, The baseline for the draft included a set of parameters for specific tables in Clauses 60 and 75. The TF Editor, following typical practice for initial draft versions, combined the approved parameters with the text, proposing also a set of changes to other clauses and locations per http://www.ieee802.org/3/bk/public/1205/8023bk_1205_hajduczenia_1a.pdf, which was discussed at the last meeting.
Additionally, the draft text is open for review until the TF decides that it is ready to move to the WG ballot. Until then, text can be modified in any way, subject to the approval by the TF.

Cl **00**   *SC* **0**   *P* **42**   *L* **11**   # 63
Remein, Duane   Huawei Technologies

Comment Type **ER**   *Comment Status* **D**
Tables and section headers in 60.10.5.5a - 5d should be marked as added text

SuggestedRemedy
Show mark-up properly. Mark-up should be against latest draft from Maintance. (or should at least be consistently either 802.3av or Maintance).

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

[Note]
Current markup is done against D3.2 of the P802.3bh draft text.

Cl **30**   *SC* **30.5.1.1.2**   *P* **16**   *L* **22**   # 2
Sugawa, Jun   Hitachi, Ltd.

Comment Type **T**   *Comment Status* **D**
"1000BASE-PX30U" is listed twice, and "1000BASE-PX40U" is missing.

SuggestedRemedy
change FROM "1000BASE-PX30U" TO "1000BASE-PX40U".

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **30**   *SC* **5.1.1.2**   *P* **16**   *L* **22**   # 65
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **D**
1000BASE-PX30U repeated from line 20

SuggestedRemedy
Change 1000BASE-PX30U to 1000BASE-PX40U

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #2 resolution.

Cl **45**   *SC* **45.2.1.11.1a**   *P* **21**   *L* **15**   # 45
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **D**
Paragraph numbering for 45.2.1.11.1a-d seems odd, verify correct numbering.

SuggestedRemedy
Correct numbering if needed and add note to editor to renumber subsequent paragraphs.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #85 resolution.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**
SC **45.2.1.11.1a**

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Cl **45**   *SC* **45.2.1.6**   *P* **19**   *L* **26**   # 14
Hajduczenia, Marek   ZTE Corporation

Comment Type **T**   *Comment Status* **D**
"10/1GBASE-PR-U4" should be "10/1GBASE-PRX-U4"
Similarly, in line 28 on same page "10/1GBASE-PR-D4" should be "10/1GBASE-PRX-D4"

SuggestedRemedy
Changes per comment

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.6**   *P* **19**   *L* **5**   # 11
Hajduczenia, Marek   ZTE Corporation

Comment Type **E**   *Comment Status* **D**
Fix the editorial note in lines 5 and 6, changing "10/1GBASE-PR-D4" to "10/1GBASE-PRX-D4" and "10/1GBASE-PR-U4" to "10/1GBASE-PRX-U4"

SuggestedRemedy
Changes per comment

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **56**   *SC* **56.1.3**   *P* **23**   *L* **46**   # 60
Remein, Duane   Huawei Technologies

Comment Type **ER**   *Comment Status* **D**
Editing instructions misplaced.

SuggestedRemedy
Move instructionf for tables 56-2 and 56-3 to immediately before the table, not a few tables away.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **60**   *SC* **.1**   *P* **27**   *L* **35**   # 48
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **D**
Tables 60-1a and 60-1b could easily be combine if rotated so that the PMD types formed the rows and the parameters were the columns

SuggestedRemedy
Combine and rotate table 60-1a and 60-1b into one table.
(see 8023bk_1206_remein_1.pfd)

Proposed Response   *Response Status* **W**
PROPOSED REJECT.

The modification and what the Table looks was consistent with the existing Tables in ah and av.

Cl **60**   *SC* **1.4**   *P* **29**   *L* **37**   # 73
Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **D**
Table 60-2
Reference for 1000BASE-PX10 seems to have changed from Table 60-8 to Table 60-5 with no change to the previously referenced table.

SuggestedRemedy
Change back to 60-8 in two places.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

The deleted text is wrong in saying "Table60-8." It will be fixed to "Table60-5".

Cl **60**   *SC* **1.4**   *P* **29**   *L* **42**   # 74
Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **D**
Table 60-2
Reference for 1000BASE-PX20 seems to have changed from Table 60-9 to Table 60-8 with no change to the previously referenced table.

SuggestedRemedy
Change back to 60-9 in two places.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

The deleted text is wrong in saying "Table60-9." It will be fixed to "Table60-8.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **60**
SC **1.4**

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Cl **60**　　　*SC* **10.3**　　　　　　*P* **41**　　　*L* **15**　　　# 55
Remein, Duane　　　　　　　Huawei Technologies

Comment Type **E**　　*Comment Status* **D**
Missing editorial note

SuggestedRemedy
Add note before 60.10.3:
"Modify the table in 60.10.3 as follows"

Proposed Response　　*Response Status* **W**
PROPOSED ACCEPT.

Cl **60**　　　*SC* **4a**　　　　　　*P* **30**　　　*L* **10**　　　# 61
Remein, Duane　　　　　　　Huawei Technologies

Comment Type **ER**　　*Comment Status* **D**
"Insert a new subclause, 60.4a, as shown below:" Since when have we started to number
clauses with alpha-numberic?
Does this inserted clause come before or after the existing Clause 60.4?

SuggestedRemedy
Provide a clear indication of where the new clause is to be inserted and what it's numeric
header is to be. my past experience has been this wold be something like "Insert a new
subclause, 60.5, as shown below, renumbering subsequent clauses"

Proposed Response　　*Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

Current numbering scheme is correct - the new material is inserted after existing subclause
60.4.

Modify the editorial note "Insert a new subclause, 60.4a, as shown below:"

to

"Insert a new subclause, 60.4a after the text in 60.4.2, as shown below:"

For the similar reason, add an editorial note after whole the text in 60.4a,

"Insert a new subclause, 60.4b after the text in 60.4a, as shown below:"

Cl **60**　　　*SC* **4a**　　　　　　*P* **30**　　　*L* **18**　　　# 67
Remein, Duane　　　　　　　Huawei Technologies

Comment Type **T**　　*Comment Status* **D**
The following note is not precisely correct "(e.g., a single-mode solution operating at 20.5
km meets the minimum range requirement of 0.5 m to 20 km for 1000BASE-PX30)"
If the solution only operated between 20 and 20.5 km it would not be compliant.

This comment also applies to Cl 60.4b pg 33 line 27.

SuggestedRemedy
Change to "(e.g., a single-mode solution operating at 0.4 m to 20.5 km meets the minimum
range requirement of 0.5 m to 20 km for ..."

Note: it would be advisable to make this change to similar wordings in Cl 60.3 and 60.4.

Proposed Response　　*Response Status* **W**
PROPOSED REJECT.

The comment is surely reasonable in improving the preciseness of the description, but this
change would affect the existing text in ah and av. It does not seem that this kind of
discussion should be made in bk TF.

Cl **60**　　　*SC* **4a.1**　　　　　　*P* **30**　　　*L* **36**　　　# 68
Remein, Duane　　　　　　　Huawei Technologies

Comment Type **T**　　*Comment Status* **D**
Table 60-8a, Wavelength. It seems to me that if we are to significantly tighten the line width
as proposed in Table 60-8b then we can certainly tighten transmitter wavelength.

This comment also applies to Cl 60.4b.1 Table 60-8d pg 33 line 44

This comment might also impact Table 60-9 if the suggested change is modified

SuggestedRemedy
Change from "1480 to 1500" and "1260 to 1360" ("1290 to 1330" in Table 8d)
to "1487.5 to 1492.5" and "1300 to 1320"

Proposed Response　　*Response Status* **W**
PROPOSED REJECT.

The technology maturiy is agreeable, but
the number of the PMD solutions should be minimized as far as the requirement is met.
The commenter should present an objective data that demonstrates that current linewidth
is poor and not enough to meet the requirement.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **60**
SC **4a.1**

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13/07/2012 08:47:06

Cl **60**   *SC* **4a.2**   *P* **31**   *L* **54**   # 69
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
Missing warning text and note regarding damage threashold as in Cl 75.4.2 and Table 75-6 of 802.3av

This same comment also applies to Cl 60.4b.2 pg 35 line 49 Table 60-8f

SuggestedRemedy
Add the following text as a seperate paragraph in 60.4a.2:
"The damage threshold included in Table 60-8c does not guarantee direct ONU–OLT connection, which may result in damage of the receiver. If direct ONU–OLT connection is necessary, optical attenuators and/or equivalent loss components should be inserted to decrease receive power below the damage threshold."
Add the following note to Damage threshold (max) in Table 60-8c:
"Direct ONU–OLT connection may result in damage of the receiver."

Make similar additions to cl 60.4b.2 and table 60-8f with appropriate changes.

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT.

Cl **60**   *SC* **4a.2**   *P* **32**   *L* **27**   # 62
Remein, Duane   Huawei Technologies

Comment Type   **ER**   *Comment Status*   **D**
The figure has not been accepted by the TF and should, at the very least, be marked so.

SuggestedRemedy
Add editors note similar to that on Figure 60-4b

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT.

Cl **60**   *SC* **4b**   *P* **33**   *L* **24**   # 50
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **D**
Table 60-lb?

SuggestedRemedy
Change to Table 60-8d.

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT.

Cl **60**   *SC* **4b**   *P* **33**   *L* **45**   # 42
Tajima, Akio♂   NEC Corporation

Comment Type   **T**   *Comment Status*   **D**
1000BASE-PX40, 10GBASE-PRX40 and 10GBASE-PR40 would be used in combination with power budget extender (PBEx) for loss budget > 33 dB. Optical amplifier is one of PBEx candidates and it is difficult to realize good performance optical amplifier with wide wavelength bandwidth such as 70 nm. Also, optical transmitter wavelength range of 1290-1330 nm cannot be realized with FP-LD.
Therefore, the wavelength range of 1000BASE-PX40-U in Table 60-8d shall be narrow as 1290-1310 nm.

SuggestedRemedy

Proposed Response   *Response Status*   **W**
PROPOSED REJECT.

In principle, narrower wavelength window is desirable and this comment is reasonable. But it is not very clear on what an appropriate center wavelength should be. The commenter should explain the technical background behind the proposal in more detail.

Cl **60**   *SC* **4b**   *P* **33**   *L* **45**   # 41
Tajima, Akio♂   NEC Corporation

Comment Type   **T**   *Comment Status*   **D**
1000BASE-PX40, 10GBASE-PRX40 and 10GBASE-PR40 would be used in combination with power budget extender (PBEx) for loss budget > 33 dB. Optical amplifier is one of PBEx candidates and it is difficult to realize good performance optical amplifier with wide wavelength bandwidth such as 70 nm. Also, optical transmitter wavelength range of 1290-1330 nm cannot be realized with FP-LD and DFB-LD shuld be used.
Therefore, the wavelength range of 1000BASE-PX40-U in Table 60-8d shall be narrow as 1290-1310 nm.

SuggestedRemedy

Proposed Response   *Response Status*   **W**
PROPOSED REJECT.

In principle, narrower wavelength window is desirable and this comment is reasonable. But it is not very clear on what an appropriate center wavelength should be. The commenter should explain the technical background behind the proposal in more detail.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **60**
SC **4b**

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Cl **60**   *SC* **5**   *P* **36**   *L* **37**   # 51

Remein, Duane   Huawei Technologies

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

There is no change to the note and it need not be included here.

SuggestedRemedy

Remove the text "NOTE—The budgets include an allowance for −12 dB reflection at the receiver."

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **60**   *SC* **5**   *P* **37**   *L* **1**   # 52

Remein, Duane   Huawei Technologies

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

It should be clear thar Table 60-9 is part of Cl 60.5 and not 60.6

SuggestedRemedy

Include editorial note that Table 60-9 is part of Cl 60.5. and, at the very least, the editorial note "Modify the text in 60.7.2 as follows:" should be after Table 60-11.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE.

Place "Modify the text in 60.7.2 as follows:" after Table 60-11.

Also, place Table 60-9 before (above) 60.6.

Cl **60**   *SC* **60.1**   *P* **27**   *L* **13**   # 12

Hajduczenia, Marek   ZTE Corporation

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

Space missing in "P2MP1000BASE-X"

SuggestedRemedy

Change to "P2MP 1000BASE-X"

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **60**   *SC* **60.1**   *P* **27**   *L* **19**   # 47

Remein, Duane   Huawei Technologies

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

Suggested wording improvement. The coma in the list between medium and singl-mode fiber is confusing.

SuggestedRemedy

Change "... 1000BASE-PX40-U, 1000BASE-PX40-D, and the medium, single-mode fiber." To "1000BASE-PX40-U, 1000BASE-PX40-D, and the single-mode fiber medium."

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **60**   *SC* **60.1**   *P* **27**   *L* **29**   # 66

Remein, Duane   Huawei Technologies

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

We seem to be implying that PX30 & PX40 are not mutually compatible with PX10 & PX20. (Which may be true)

SuggestedRemedy

Add editorial note: "Compatibility of PX30 and PX40 with previous generations must be established".

Proposed Response   *Response Status*   **W**

PROPOSED REJECT.

The requirement "Compatibility of PX30 and PX40 with previous generations must be established" is not very clear. The commenter should explain it in more detail.

Cl **60**   *SC* **60.1**   *P* **27**   *L* **33**   # 80

Anslow, Pete   Ciena

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

This says: "Insert a new Table 60-1b, following Table 60-1a, as shown below:", but there is no Table 60-1a in IEEE Std 802.3 and the two tables 60-1a and 60-1b shown have the same title.

SuggestedRemedy

Leave the first table as Table 60-1 and make the newly insrted table "Table 60-1a" and make the titles different from each other.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **60**   Page 6 of 20

COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **60.1**   13/07/2012 08:47:06

SORT ORDER: Clause, Subclause, page, line

_Cl_ **60**   _SC_ **60.1**   _P_ **27**   _L_ **5**   # 81

Anslow, Pete   Ciena

Comment Type   **E**   _Comment Status_   **D**

The editing instruction says "Modify the text of 60.1 as shown below:" but not all of the text of 60.1 is shown.

The reference to Table 60-1 at the end of 60.1 needs changing if Table 61-1b is inserted.

SuggestedRemedy

Either:

show all of the text of 60.1

or change the editing instruction to "Change the text of the first two paragraphs of 60.1 as follows:" and show the whole of the text of the first two paragraphs.

Also, fix the reference to Table 60-1 at the end of 60.1

Proposed Response   _Response Status_   **W**

PROPOSED ACCEPT IN PRINCIPLE.

Show all of the text of 60.1 by adding the following text at the end of current description:

"Two optional temperature ranges are defined; see 60.8.4 for further details. Implementations may be
declared as compliant over one or both complete ranges, or not so declared (compliant over parts of these
ranges or another temperature range).
Table 60–1 and 60-1a show the primary attributes of each PMD type."

_Cl_ **60**   _SC_ **60.1**   _P_ **27**   _L_ **9**   # 46

Remein, Duane   Huawei Technologies

Comment Type   **E**   _Comment Status_   **D**

Suggested wording improvement. Existing text:
"The 1000BASE-PX10 and 1000BASE-PX20 PMD sublayers provide point-to-multipoint (P2MP) 1000BASE-X connections over passive optical networks (PONs) up to at least 10 km and 20 km, respectively and with a typical split ratio of 1:16. The 1000BASE-PX30 PMD sublayers provide P2MP 1000BASE-X connections over PONs up to at least 20 km, and with a typical split ratio of 1:32. The 1000BASE-PX40 PMD sublayers provide P2MP1000BASE-X connections over PONs up to at least 20 km, respectively and with a typical split ratio of 1:64."

SuggestedRemedy

The 1000BASE-PX10, 1000BASE-PX20, 1000BASE-PX30 and 1000BASE-PX40 PMD sublayers provide point-to-multipoint (P2MP) 1000BASE-X connections over passive optical networks (PONs). The 1000BASE-PX10 PMD sublayer provides at least 10 km reach whereas the 1000BASE-PX20, 1000BASE-PX30 and 1000BASE-PX40 PMD sublayers provide at least 20 km reach. The 1000BASE-PX10, and 1000BASE-PX20 PMD sublayers provide a typical split ratio of 1:16. The 1000BASE-PX30 PMD sublayer provided a typical split ratio of 1:32. The 1000BASE-PX40 PMD sublayer provides a typical split ratio of 1:64.

Proposed Response   _Response Status_   **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change the existing text "The 1000BASE-PX10 and 1000BASE-PX20 PMD sublayers provide point-to-multipoint (P2MP) 1000BASE-X connections over passive optical networks (PONs) up to at least 10 km and 20 km, respectively and with a typical split ratio of 1:16. The 1000BASE-PX30 PMD sublayers provide P2MP 1000BASE-X connections over PONs up to at least 20 km, and with a typical split ratio of 1:32. The 1000BASE-PX40 PMD sublayers provide P2MP1000BASE-X connections over PONs up to at least 20 km, respectively and with a typical split ratio of 1:64."

to:

"The 1000BASE-PX10, 1000BASE-PX20, 1000BASE-PX30, and 1000BASE-PX40 PMD sublayers provide point-to-multipoint (P2MP) 1000BASE-X connections over passive optical networks (PONs). The 1000BASE-PX10 PMD sublayer provides at least 10 km reach whereas the 1000BASE-PX20, 1000BASE-PX30, and 1000BASE-PX40 PMD sublayers provide at least 20 km reach. The 1000BASE-PX10 and 1000BASE-PX20 PMD sublayers provide a typical split ratio of 1:16. The 1000BASE-PX30 PMD sublayers provide a typical split ratio of 1:32. The 1000BASE-PX40 PMD sublayers provide a typical split ratio of 1:64."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   _Cl_ **60**   Page 7 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   _SC_ **60.1**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **60** *SC* **60.1** *P* **28** *L* **16** # 16
Hajduczenia, Marek ZTE Corporation

Comment Type **T** *Comment Status* **D**
Note c) applied to the "Minimum channel insertion loss" parameter does not make sense for PX30 and PX40 PMDs, since there is no difference between upstream and downstream channel loss.

SuggestedRemedy
Remove note c) for Table 60-1b

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **60** *SC* **60.1** *P* **28** *L* **5** # 15
Hajduczenia, Marek ZTE Corporation

Comment Type **T** *Comment Status* **D**
PX30 and PX40 PMDs use "IEC 60793–2 B1.1, B1.3 SMF" as well as "ITU–T G.652, G.657 SMF" - support for these new fiber types was added in 802.3av.

SuggestedRemedy
Change "B1.1, B1.3 SMF" to "IEC 60793–2 B1.1, B1.3 SMF, ITU–T G.652, G.657 SMF"

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

Cl **60** *SC* **60.1.1** *P* **29** *L* **3** # 49
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **D**
How can goal b,c,d & e apply to all four PMDs?

SuggestedRemedy
Change section to read:
The following are the objectives of 1000BASE-PX10 and , 1000BASE-PX20, 1000BASE-PX30, and 1000BASE-PX40:
a) Point-to-multipoint on optical fiber.
b) BER better than or equal to 10-12 at the PHY service interface.
An objective of 1000BASE-PX10 is 1000 Mb/s up to 10 km on one single-mode fiber supporting a fiber split ratio of 1:16.
An objective of 1000BASE-PX20 is 1000 Mb/s up to 20 km on one single-mode fiber supporting a fiber split ratio of 1:16.
An objective of 1000BASE-PX30 is 1000 Mb/s up to 20 km on one single-mode fiber supporting a fiber split ratio of 1:32.
An objective of 1000BASE-PX40 is 1000 Mb/s up to 20 km on one single-mode fiber supporting a fiber split ratio of 1:64.

Proposed Response *Response Status* **W**
PROPOSED REJECT.

The text we are extending has been balloted on and it is part of the currently approved D3.2 of P802.3bh (maintenance project). Nobody complained about this text and it is clear to everybody what it means. The objectives are for the project and not specific PMDs.

Cl **60** *SC* **60.10.4.5a** *P* **42** *L* **13** # 26
Hajduczenia, Marek ZTE Corporation

Comment Type **T** *Comment Status* **D**
"3000BASE" - does not exist really ... and it is spread present in 60.10.4.5a, 60.10.4.5b.

SuggestedRemedy
Change "3000BASE" to "1000BASE"

Proposed Response *Response Status* **W**
PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **60**
SC **60.10.4.5a**

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Cl **60**   *SC* **60.4a.1**   *P* **16**   *L* **44**   # 3
Sugawa, Jun   Hitachi, Ltd.

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

About Table 60-8a.
The Launch OMA (min) value of 1000BASE-PX30-D in dBm unit is described, but the value in mW unit is not described.

SuggestedRemedy

change Launch OMA(min) value of 1000BASE-PX30-D FROM "3.78(TBD)" TO "3.78(2.39)".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Commenter refers to wrong line and page numbers. It should have been described as "l. 45, p. 30)

Cl **60**   *SC* **60.4a.1**   *P* **30**   *L* **30**   # 13
Hajduczenia, Marek   ZTE Corporation

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

In Table 60–8a, Table 60–8c, Table 60–8d and Table 60–8f merge rows with the same values, similar to what was done for Table 75–5

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

What it looks in bk should be consistent with the existing Tables in ah and av standard.

Cl **60**   *SC* **60.4a.1**   *P* **30**   *L* **45**   # 17
Hajduczenia, Marek   ZTE Corporation

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

TBD value for Launch OMA (min) in mW

SuggestedRemedy

Change "TBD" to "2.39" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #3 resolution.

Cl **60**   *SC* **60.4a.1**   *P* **31**   *L* **16**   # 39
Hajduczenia, Marek   ZTE Corporation

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

Table 60-8b is missing currently RMS spectral width for downstream wavelength range (1480 - 1500 nm), similar to what is already in place in Table 60-4 and Table 60-8 in the base document

SuggestedRemedy

Insert two new rows into Table 60-8b (at the end of the table) with the following content

- row 1: empty / empty / empty
- row 2: 1480 to 1500 / 0.25 / 0.21

The values were recalculated to account for a smaller epsilon value and tigher TDP values.

Modify text on page 38, lines 34-37 in the following way:
- change first TBD in this para to value of "0.095"
- change second TBD in this para to value of "0.08"
See 8023bk_1207_hajduczenia_2.xlsx for details of the calculation of the values for 1480 - 1500 nms range as well as target epsilon values (normative and informative)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **60**   *SC* **60.4a.1**   *P* **31**   *L* **16**   # 38
Hajduczenia, Marek   ZTE Corporation

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

Table 60-8b corresponds to Table 75-10 as published in 802.3av and it is applicable to PX30-U PMD without any changes.

SuggestedRemedy

Remove the statement "(Tentative)" on page 31, line 16
Remove the editorial note, on page 31, line 41
See 8023bk_1207_hajduczenia_2.xlsx for confirmation of values calculated for epsilon of 0.095 (normative) and 0.08 (informative)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **60**
SC **60.4a.1**

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Cl **60**   *SC* **60.4a.1**   *P* **31**   *L* **5**   # 77

Nishihara, Susumu   NTT

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

Transmitter and dispersion penalty (max) for PX30-D was 1.0 dB. However, it was 2.3 dB
for 1000BASE-PX20-D regardless of the same wavelength range of 1480 to 1500 nm.

SuggestedRemedy

Change the description of "1 dB" in the column to "TBD".
Also, discuss it in TF for more appropriate value.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "1 dB" to "2.3 dB" to be consistent with the existing specifications.

Cl **60**   *SC* **60.4a.2**   *P* **32**   *L* **44**   # 4

Sugawa, Jun   Hitachi, Ltd.

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

About Table 60-8c

The value of Receiver sensitivity OMA(max) in dBm unit of 1000BASE-PX30U is
described, but the value in micro Watt unit is not described.

SuggestedRemedy

CHANGE the value of Receiver sensitivity OMA(max)
FROM "-26.2" TO "-26.2(2.40)"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change the value of Receiver sensitivity OMA (max) from "-26.2" to "-26.22 (2.39)".

Cl **60**   *SC* **60.4a.2**   *P* **32**   *L* **44**   # 18

Hajduczenia, Marek   ZTE Corporation

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

missing value for "Receiver sensitivity OMA (max)" in uW

SuggestedRemedy

Add the value "(2.39)" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #4 resolution.

Cl **60**   *SC* **60.4a.2**   *P* **32**   *L* **48**   # 19

Hajduczenia, Marek   ZTE Corporation

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

Missing value for "Stressed receive sensitivity (max)" parameter

SuggestedRemedy

Change "TBD" to "-26.00" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "TBD" to "-26".

Cl **60**   *SC* **60.4a.2**   *P* **32**   *L* **51**   # 20

Hajduczenia, Marek   ZTE Corporation

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

Missing value for "Stressed receive sensitivity OMA (max)" parameter

SuggestedRemedy

Change "TBD (TBD)" to "-25.22 (3.01)" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **60**   Page 10 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **60.4a.2**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **60**   *SC* **60.4b.1**   *P* **33**   *L* **39**   # 40
Hajduczenia, Marek   ZTE Corporation

Comment Type **T**   *Comment Status* **D**
The downstream and upstream transmitters for PX40 PMD as baselined were based on
DML devices and it is unlikely that the target power levels and distance reach can be
achieved with FPLs.
Under this assumption, we should not be specifying transmitters via RMS spectral width
but rather use the methodology more suitable for DML devices, i.e. use the Side Mode
Supression ratio parameter, as used in 10G-EPON

SuggestedRemedy
Implement the following changes:
- in Table 60–8d, replace the row "RMS spectral width (max)" with "Side Mode Suppression
Ratio (min)a" and insert the value of "30" for 1000BASE-PX40-D and 1000BASE-PX40-U
columns (a single value can be used). Units are "dB"
- insert note "a" under table with the following text: "Transmitter is a single longitudinal
mode device. Chirp is allowed such that the total optical path penalty does not exceed
that found in Table 60-9". Renumber the remaining notes in the table
- Remove Table 60–8e, Figure 60–4b with associated notes
- Remove text on page 34, lines 19-21
- Remove text on page 38, lines 39-42
- Rewrite text on page 38, lines 44/45 to read as follows: "The chromatic dispersion penalty
is a component of transmitter and dispersion penalty (TDP), which is specified in Table 60-
3, Table 60-6, and Table 60–8a, and described in 58.7.9."

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

There is no term of "optical path penalty" in Table 60-9. Therefore, inserted text needs a
small change as follows:

Change the text from

"Transmitter is a single longitudinal mode device. Chirp is allowed such that the total
optical path penalty does not exceed that found in Table 60-9".

to

"Transmitter is a single longitudinal mode device. Chirp is allowed such that the total
penalty does not exceed that found in Table 60-9".

Cl **60**   *SC* **60.4b.1**   *P* **33**   *L* **54**   # 21
Hajduczenia, Marek   ZTE Corporation

Comment Type **T**   *Comment Status* **D**
Missing value for "Launch OMA (min)" parameter expressed in (mW)

SuggestedRemedy
Insert values (3.10) in 1000BASE-PX40-D column
Insert values (1.90) in 1000BASE-PX40-U column
(based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

Add the value of 3.01 mW in "Launch OMA (min)" column for PX40-D, instead of 3.10 mW.

Cl **60**   *SC* **60.4b.1**   *P* **34**   *L* **12**   # 79
Nishihara, Susumu   NTT

Comment Type **T**   *Comment Status* **D**
Transmitter and dispersion penalty (max) for 1000BASE-PX40-U should be 1.4 dB, which
is the same as value for PX30-U.

SuggestedRemedy
Transmitter and dispersion penalty (max) for 1000BASE-PX40-U from 1.0 dB to 1.4 dB.

Proposed Response   *Response Status* **W**
PROPOSED REJECT.

PX40-U uses DFB laser and 1.0-dB TDP is reasonable.

Cl **60**   *SC* **60.4b.1**   *P* **34**   *L* **12**   # 78
Nishihara, Susumu   NTT

Comment Type **T**   *Comment Status* **D**
Transmitter and dispersion penalty (max) for PX40-D was 1.0 dB. However, it was 2.3 dB
for 1000BASE-PX20-D regardless of the same wavelength range of 1480 to 1500 nm.

SuggestedRemedy
Change the description of "1 dB" in the column to "TBD".
Also, discuss it in TF for more appropriate value.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #77 resolution.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **60**   Page 11 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **60.4b.1**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **60**   *SC* **60.4b.2**   *P* **35**   *L* **53**   # 76

Nishihara, Susumu   NTT

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

Receiver sensitiviy OMA values are described in more detail.

SuggestedRemedy

Instead of -31.2 dBm and -29.2 dBm for PX40-D and PX40-U, they should be described as -31.22 dBm and -29.22 dBm, respectively.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE.

Insert values "-31.22 (0.76)" in 1000BASE-PX40-D column
Insert values "-29.22 (1.20)" in 1000BASE-PX40-U column

Cl **60**   *SC* **60.4b.2**   *P* **35**   *L* **54**   # 22

Hajduczenia, Marek   ZTE Corporation

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

Missing value for "Receiver sensitivity OMA (max)" parameter expressed in (uW)

SuggestedRemedy

Insert values (0.76) in 1000BASE-PX40-D column
Insert values (1.20) in 1000BASE-PX40-U column
(based on link model spreadsheet calculations)

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #76 resolution.

Cl **60**   *SC* **60.4b.2**   *P* **36**   *L* **11**   # 24

Hajduczenia, Marek   ZTE Corporation

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

Missing value for "Stressed receive sensitivity OMA (max)" parameter

SuggestedRemedy

Insert values "-30.22 (0.95)" in 1000BASE-PX40-D column
Insert values "-28.22 (1.55)" in 1000BASE-PX40-U column
(based on link model spreadsheet calculations)

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **60**   *SC* **60.4b.2**   *P* **36**   *L* **8**   # 23

Hajduczenia, Marek   ZTE Corporation

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

Missing value for "Stressed receive sensitivity (max)" parameter

SuggestedRemedy

Insert values "-31.00" in 1000BASE-PX40-D column
Insert values "-29.00" in 1000BASE-PX40-U column
(based on link model spreadsheet calculations)

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE.

Insert values "-31" in 1000BASE-PX40-D column
Insert values "-29" in 1000BASE-PX40-U column

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **60**   Page 12 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **60.4b.2**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **60**   *SC* **60.7.2**   *P* **37**   *L* **17**   # 25

Hajduczenia, Marek   ZTE Corporation

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

Table 60–9 contains a number of TBD values which need to be filled in based on the link model spreadsheet calculations

SuggestedRemedy

Replace the following instances of TBD:
- 1000BASE-PX30 column, upstream, Optical return loss of ODN (min): 20
- 1000BASE-PX30 column, downstream, Optical return loss of ODN (min): 20
- 1000BASE-PX40 column, upstream, Optical return loss of ODN (min): 20
- 1000BASE-PX40 column, downstream, Optical return loss of ODN (min): 20
- 1000BASE-PX30 column, downstream, Available power budget: 30.0
- 1000BASE-PX40 column, upstream, Available power budget: 34.0
- 1000BASE-PX40 column, downstream, Available power budget: 34.0
- 1000BASE-PX30 column, downstream, Allocation for penalties: 1
- 1000BASE-PX40 column, upstream, Allocation for penalties: 1
- 1000BASE-PX40 column, downstream, Allocation for penalties: 1

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Allocation penalty for PX30 upstream should be 1.4 dB instead of 1.0 dB to be consistent with PRX30 upstream in av.
Allocation penalties for PX30 and PX40 downstream should be further investigated since PX20 downstream, TDP and allocation penalty were 2.3 dB and 2.5 dB, respectively.

Replace the following instances of TBD:
- 1000BASE-PX30 column, upstream, Optical return loss of ODN (min): 20
- 1000BASE-PX30 column, downstream, Optical return loss of ODN (min): 20
- 1000BASE-PX40 column, upstream, Optical return loss of ODN (min): 20
- 1000BASE-PX40 column, downstream, Optical return loss of ODN (min): 20
- 1000BASE-PX30 column, upstream, Available power budget: 30.4
- 1000BASE-PX30 column, upstream, Allocation for penalties: 1.4
- 1000BASE-PX40 column, upstream, Available power budget: 34
- 1000BASE-PX40 column, upstream, Allocation for penalties: 1

Also, merge all columns of Optical return loss into one column.

Cl **60**   *SC* **7.13.1**   *P* **39**   *L* **18**   # 54

Remein, Duane   Huawei Technologies

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

Unchanged lines in the section need not be included.

SuggestedRemedy

remove the following text:
"Tcdr is defined in 65.3.2.1 value is less than 400 ns (defined in 60.2.2)."
and
"Tcode_group_align is defined in 36.3.2.4 value is less than 4 ten-bit code-groups."

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

What the commenter says true, but we have just two unchanged sentences here. Removal of existing text should not impede readability of introduced changes. Large blocks of unchanged text were removed to conserve space.

Cl **60**   *SC* **7.2**   *P* **38**   *L* **23**   # 53

Remein, Duane   Huawei Technologies

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

There is no change to the two lead in paragraphs and they should not be inlcuded.

SuggestedRemedy

Remove first two paragraphs.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

What used to be a single paragraph was now divided into two paragraph for clarity and simpler addition of text on PX30 and PX40 PMDs. Add an editorial note to separate the paragraph into two as shown in the draft.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **60**
SC **7.2**

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Cl **60**   *SC* **9.2**   *P* **40**   *L* **25**   # 70

Remein, Duane   Huawei Technologies

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

While 1000BASE-PX10/20 were not origionally specified for newer fibers would they not work with these fibers? I think they would indeed work and thus the paragraph at line 29 should equally apply to all PMDs.

Might also consider updating Table 60-9 and 60-1

Note also taht Table 60-1 conflicts with Table 60-9

SuggestedRemedy

Strike the paragraph at line 25 adn reword the first sentance starting at line 29 to read "The fiber optic cable requirements for 1000BASE-PX10, 1000BASE-PX20, 1000BASE-PX30 and 1000BASE-PX40 are satisfied by the fibers ..."

Change Fiber Type for all entries of Tablel 60-1 and 60-9 to "B1.1, B1.3 SMF ITU-T G.652, G.657 SMF"

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

What the commenter means is probably true, but, at the same time, such modifications are not necessary and it is outside the scope of our TF to modify the balloted and approved specifications.

Cl **60**   *SC* **9.2**   *P* **40**   *L* **31**   # 71

Remein, Duane   Huawei Technologies

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

Table 75-14? I think not.

SuggestedRemedy

Change to Table 60-14.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Here we are talking about PX30 and PX40, and the reference is correct.

Cl **75**   *SC* **1**   *P* **46**   *L* **22**   # 44

Tajima, Akio♂   NEC Corporation

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

1000BASE-PX40, 10GBASE-PRX40 and 10GBASE-PR40 would be used in combination with power budget extender (PBEx) for loss budget > 33 dB. Optical amplifier is one of PBEx candidates and it is difficult to realize good performance optical amplifier with wide wavelength bandwidth such as 70 nm. Also, optical transmitter wavelength range of 1290-1330 nm cannot be realized with FP-LD.
Therefore, the wavelength range of 1000BASE-PX40-U in Table 75-1 shall be narrow as 1300 +/-10 nm.

SuggestedRemedy

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

In principle, narrower wavelength window is desirable and this comment is reasonable. But it is not very clear on what an appropriate center wavelength should be. The commenter should explain the technical background behind the proposal in more detail.

Cl **75**   *SC* **1**   *P* **46**   *L* **22**   # 43

Tajima, Akio♂   NEC Corporation

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

1000BASE-PX40, 10GBASE-PRX40 and 10GBASE-PR40 would be used in combination with power budget extender (PBEx) for loss budget > 33 dB. Optical amplifier is one of PBEx candidates and it is difficult to realize good performance optical amplifier with wide wavelength bandwidth such as 70 nm. Also, optical transmitter wavelength range of 1290-1330 nm cannot be realized with FP-LD and DFB-LD shuld be used.
Therefore, the wavelength range of 1000BASE-PX40-U in Table 75-1 shall be narrow as 1300 +/-10 nm.

SuggestedRemedy

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

In principle, narrower wavelength window is desirable and this comment is reasonable. But it is not very clear on what an appropriate center wavelength should be. The commenter should explain the technical background behind the proposal in more detail.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **75**   Page 14 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **1**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **75**   *SC* **1.2**   *P* **45**   *L* **15**   # 56
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **D**
How many "at least"s are really needed?
"... at least 1:16, at least 1:32 and at least 1:64, and distances of at least 10 km and at least 20 km."

SuggestedRemedy
Reword as follows:
"... split ratios of at least 1:16, 1:32, and 1:64, and distances of at least 10 km and 20 km."

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **75**   *SC* **1.3**   *P* **45**   *L* **18**   # 57
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **D**
Exactly how does one "modify as new bullet"?

SuggestedRemedy
Change editorial note to read:
"Add a new bullet on extended power budget class in 75.1.3, as shown below:"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **75**   *SC* **4.1**   *P* **49**   *L* **18**   # 72
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **D**
Why is Launch OAM marked "TBD"? There is no indication in the motion that adoped this material that this figure is TBD

SuggestedRemedy
Remove "(TBD)"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #27 resolution.

Cl **75**   *SC* **4.2**   *P* **50**   *L* **9**   # 58
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **D**
Why is Receiver sensitivity OMA (max) "TBD"? There is no indication in the motion that adoped this material that this figure is TBD

This comment also applies to Table 75-11 cl 75.5.2 pg 55 line 26

SuggestedRemedy
Remove "(TBD)"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #28 resolution.

Cl **75**   *SC* **5**   *P* **51**   *L* **41**   # 64
Remein, Duane   Huawei Technologies

Comment Type **ER**   *Comment Status* **D**
If a note is removed from the table the remaining notes should be renumbered

SuggestedRemedy
Renumber notes b-c to a-b.

Proposed Response   *Response Status* **W**
PROPOSED REJECT.

Editing was incorrect. Move note a to "Stressed receive sensitivity (max)" column.
Modify the text in note a from:
"The stressed receive sensitivity is mandatory"

to

"The stressed receive sensitivity is mandatory for 10/1GBASE-PRX-D3 and 10/1GBASE-PRX-D4 PMDs"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **75**   Page 15 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **5**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **75**   *SC* **5.2**   *P* **53**   *L* **46**   # 59

Remein, Duane   Huawei Technologies

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

Apparently more than modification to a table is being done.

SuggestedRemedy

Add editorial note to read:
"Delete Figure 75-6 and Table 75-10 as shown below"

Move note reading "Modify Table 75–11 as shown below." to below Table 75-10

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75**   *SC* **75.4.1**   *P* **49**   *L* **1**   # 27

Hajduczenia, Marek   ZTE Corporation

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

10GBASE–PR–D2 and 10GBASE–PR–D4 seem to share all the parameters including
Launch OMA (min), which should be equal to "6.91 (4.91)", since it is calculated for ER = 9
dB. This means that 10GBASE–PR–D2 and 10GBASE–PR–D4 can be merged together

SuggestedRemedy

Change column "10GBASE–PR–D2, 10/1GBASE–PRX–D2" to "10GBASE–PR–D2,
10GBASE–PR–D4, 10/1GBASE–PRX–D2"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Merge two rows together per comment.

Cl **75**   *SC* **75.4.1**   *P* **49**   *L* **18**   # 5

Sugawa, Jun   Hitachi, Ltd.

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

About Table 75-5
The values of average launch power(min) and Extiction ratio in 10GBASE-PR-D4 are same
as the values in 10GBASE-PR-D2.
But the value of Launch OMA(min) in 10GBASE-PR-D4 is different from the value in
10GBASE-PR-D2.
The value of Launch OMA(min) is not consistent with the value of average launch
power(min) and Extinction ratio.

SuggestedRemedy

Chnage the value of Launch OMA(min) of 10GBASE-PR-D4
FROM "5.78(TBD)" TO "6.91(4.91)"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #27 resolution.

Cl **75**   *SC* **75.4.2**   *P* **49**   *L* **50**   # 35

Hajduczenia, Marek   ZTE Corporation

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

The value of "Average receive power (max)" for 10GBASE–PR–D4 is incorrect. It is -9
dBm, but based on the link model calculations, it should be -8

SuggestedRemedy

Change -9 to -8 for the selected parameter

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Further discussion is needed.
Another solution is to change the transmitter output power for PR40-U device from 10 to 11
dBm.

Cl **75**   *SC* **75.4.2**   *P* **49**   *L* **50**   # 29

Hajduczenia, Marek   ZTE Corporation

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

The value of "Stressed receive sensitivity (max)" is missing for 10GBASE–PR–D4

SuggestedRemedy

Change "TBD" to "-27" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **75**   Page 16 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **75.4.2**   13/07/2012 08:47:06
SORT ORDER: Clause, Subclause, page, line

Cl **75**   *SC* **75.4.2**   *P* **50**   *L* **18**   # 30

Hajduczenia, Marek   ZTE Corporation

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

The value of "Stressed receive sensitivity OMA (max)" is missing for 10GBASE–PR–D4

SuggestedRemedy

Change "TBD" to "-26.22 (2.39)" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75**   *SC* **75.4.2**   *P* **50**   *L* **8**   # 6

Sugawa, Jun   Hitachi, Ltd.

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

About Table 75-6

The value of Receiver sensitivity OMA(max) of 10GBASE-PR-D4 in dBm unit is described, but the value in micro Watt unit is not described.

SuggestedRemedy

change the value of Receiver sensitivity OMA(max) in 10GBASE-PR-D4
FROM "-28.2(TBD)" TO "-28.2(1.51)".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #28 resolution.

Cl **75**   *SC* **75.4.2**   *P* **50**   *L* **8**   # 28

Hajduczenia, Marek   ZTE Corporation

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

Need to provide value for "Receiver sensitivity OMA (max)" parameter, expressed in uW

SuggestedRemedy

Change "TBD" to "1.26" (based on link model spreadsheet calculations)
Modify also the value in dBM from 28.2 to 28.22, consistent with the resolution used in 802.3av

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75**   *SC* **75.5.1**   *P* **52**   *L* **13**   # 10

Sugawa, Jun   Hitachi, Ltd.

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

About Table75-8

The value of Average launch power(min) of 10GBASE-PR-U4 is 2dB higher than that of 10GBASE-PR-U3. I think the transmitter which average launch power(min) of more than 6dBm is technical feasible. But I think that the economical feasibilty is not shown in extended EPON Study Group and Task Force.

SuggestedRemedy

I think data about the economical feasibility of the transimitter which satisfy 10GBASE-PR-U4 should be shown. For example, data about relative cost of 10GBASE-PR-U4 transceiver compared to 10GBASE-PR-U3 transceiver should be shown.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Ask David Li (Hisense) or other experts for further contribution to support the economical feasibility, specifically of 10GBASE-PR-U4 transmitter. Relative cost estimation of 10GBASE-PR-U4 transmitter compared to 10GBASE-PR-U3 will also be helpful.

Cl **75**   *SC* **75.5.1**   *P* **52**   *L* **18**   # 31

Hajduczenia, Marek   ZTE Corporation

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

The value of Launch OMA (min) for 10GBASE–PR–U4 PMD is calculated incorrectly.

SuggestedRemedy

Change "4.78 (3.01)" to 6.78 (4.77)" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **75**   Page 17 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **75.5.1**   13/07/2012 08:47:06
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Cl **75**   *SC* **75.5.2**   *P* **55**   *L* **21**   # 7

Sugawa, Jun   Hitachi, Ltd.

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

About Table 75-11

The value of the damage threshold is 1dB higher than the value of the average receive power(max) in 10GBASE-PR-U1, 10GBASE-PR-U3, etc.
But the value of the damage threshold(max) in 10GBASE-PR-U4 and 10/1GBASE-PRX-U4 is 4dB higher than the value of average receiver power(max).
I think the damage threshold of -5dBm is feasible for APD receiver, but I'm afraid that the damage threshold is specified as unnecesarrily high value.

SuggestedRemedy

change the value of the damage threshold(max) in 10GBASE-PR-U4 and 10/1GBASE-PRX-U4 from "-5" to "-8".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75**   *SC* **75.5.2**   *P* **55**   *L* **26**   # 32

Hajduczenia, Marek   ZTE Corporation

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

The value of "Receiver sensitivity OMA (max)" parameter to correspond to values calculated based on the link model

SuggestedRemedy

Change the value "-28.7 (TBD)" to "-27.59 (1.12)" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75**   *SC* **75.5.2**   *P* **55**   *L* **26**   # 8

Sugawa, Jun   Hitachi, Ltd.

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

About Table 75-10

The value of the Receiver sensitivity OMA (max) of 10GBASE-PR-U4, 10/1GBASE-PRX-U4 in dBm unit is described, but the value in micro Watt unit is not described.

SuggestedRemedy

change the value of the Receiver sensitivity OMA(max) in 10GBASE-PR-U4 and 10/1GBASE-PRX-U4 from "-28.7 (TBD)" to "-28.7(1.35)".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #32 resolution.

Cl **75**   *SC* **75.5.2**   *P* **55**   *L* **33**   # 33

Hajduczenia, Marek   ZTE Corporation

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

The value of "Stressed receive sensitivity (max)" parameter to correspond to values calculated based on the link model

SuggestedRemedy

Change the value "TBD" to "-28" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75**   *SC* **75.5.2**   *P* **55**   *L* **35**   # 34

Hajduczenia, Marek   ZTE Corporation

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

The value of "Stressed receive sensitivity OMA (max)" parameter to correspond to values calculated based on the link model

SuggestedRemedy

Change the value "TBD" to "-26.09 (2.46)" (based on link model spreadsheet calculations)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **75**   Page 18 of 20
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SORT ORDER: Clause, Subclause, page, line

Cl **75B**   *SC* **75B.2.1**   *P* **65**   *L* **20**   # **82**

Anslow, Pete   Ciena

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

This says "Modify the content in Table75B-1 by inserting row for PR40 as follows:" but it is a column that has been inserted.

Same issue for Table 75B-2

SuggestedRemedy

Change to: "Change Table 75B-1 by inserting a column for PR40 as follows:"

Same for Table 75B-2

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75B**   *SC* **75B.2.1**   *P* **65**   *L* **37**   # **36**

Hajduczenia, Marek   ZTE Corporation

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

Table 75B-1 has a number of missing parameters, marked as TBD.

SuggestedRemedy

Fill in Table 75B-1 with the following values:
- Available power budget, column PR40, US: 35.00
- Available power budget, column PR40, DS: 34.50
- Allocation for penalties, column PR40, US: 2
- Allocation for penalties, column PR40, DS: 1.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Allocations for penalty and TDP were both 3 dB in PR-30 upstream, but those values for PR-40 upstream are now both 2 dB, and should be further investigated. Same resolution to TDP of 10GBASE-PR-U4 (2 dB) inTable 75-8.

Fill in Table 75B-1 with the following values:
- Available power budget, column PR40, DS: 34.50
- Allocation for penalties, column PR40, DS: 1.5

Cl **75B**   *SC* **75B.2.1**   *P* **66**   *L* **28**   # **37**

Hajduczenia, Marek   ZTE Corporation

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

Table 75B-2 has a number of missing parameters, marked as TBD.

SuggestedRemedy

Fill in Table 75B-1 with the following values:
- Available power budget, column PRX40, US: 34.00
- Available power budget, column PRX40, DS: 34.50
- Allocation for penalties, column PRX40, US: 1
- Allocation for penalties, column PRX40, DS: 1.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75B**   *SC* **75B.2.2**   *P* **67**   *L* **3**   # **83**

Anslow, Pete   Ciena

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

This says "Modify the description in Table75B.2.2 ..." but 75B.2.2 isn't a table

SuggestedRemedy

Change "Table75B.2.2" to "75B.2.2"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **75B**   *SC* **75B.2.2**   *P* **67**   *L* **9**   # **9**

Sugawa, Jun   Hitachi, Ltd.

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

The sentence "The two wavelength bands overlap, thus WDM channel multiplexing cannot be used to separate the two data rates." seems to be ambiguous since three wavelength bands 1260-1360, 1290-1330, 1260-1280 appear in previous sentence.

And WDM channel multiplexing is possible if 1000BASE-PX40-U, 10GBASE-PRX-U4 compliant ONUs and 10GBASE-PR-U4 compliant ONUs are used.

SuggestedRemedy

change the sentence as follows:
"The 1260-1360 wavelengh bands and the 1260-1280 wavelength bands 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 10GBASE-PRX-U1, 10GBASE-PRX-U2, 10GBASE-PRX-U3 compliant ONUs.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **75B**   Page 19 of 20
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **75B.2.2**   13/07/2012 08:47:06
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Cl **99**   *SC*   *P* **1**   *L* **32**   # 1

Sugawa, Jun   Hitachi, Ltd.

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

The expression of "PR(X)40" is obscure.

SuggestedRemedy

change the following sentence FROM
"It provides physical layer specifications and management parameters for EPON operation
on point-to-multipoint passive optical networks supporting extended power budget classes
of PX30, PX40 and PR(X)40."
TO
"It provides physical layer specifications and management parameters for EPON operation
on point-to-multipoint passive optical networks supporting extended power budget classes
of PX30, PX40, PRX40 and PR40."

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
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Cl **99**
SC

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