Cl **1** *SC* *P* **30** *L* **38** # 2

Laubach, Mark Broadcom Limited

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

Editing instruction: suggest changing "in after" to "after".
Same for line 45

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **FM** *SC* *P* **1** *L* **18** # 120

Maguire, Valerie Siemon

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

Extraneous "." at the end of the amendment title

SuggestedRemedy

Delete extraneous "."

Response *Response Status* **C**

ACCEPT.

Cl **FM** *SC* *P* **4** *L* **10** # 132

Smith, Daniel Seagate

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

spelling of the word arabic

SuggestedRemedy

Arabic not arabic

Response *Response Status* **C**

ACCEPT.

Cl **FM** *SC* **FM** *P* **8** *L* **7** # 331

Law, David HPE

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

Please add Working Group voter list supplied in IEEE_P802d3cb_WG_names_DL_290816.fm

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **FM** *SC* **FM** *P* **8** *L* **16** # 72

Gardner, Andrew Linear Technology

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

Name for Task Force Editor-in-Chief is "FirstName SecondName."

SuggestedRemedy

Insert correct name for Task Force Editor-in-Chief

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Daniel F. Smith added as editor in chief.
Jim Hatfield added as editor.

Cl **FM** *SC* **Abstract** *P* **3** *L* **1** # 330

Donahue, Curtis UNH-IOL

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

The first sentence of the abstract is strange. "This amendment to the IEEE Std 802.3-2015". Either it needs improvement or should be removed (I don't see similar text from other amendments).

SuggestedRemedy

Change or remove.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
OBE, see comment #158.

Cl **00** *SC* *P* **101** *L* **42** # 115

Bains, Amrik Cisco Systems

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

1000BASE-KX shpuld be changes to 2.5GBAS-KXE

"The 1000BASE-KX PHY receiver should put unused functional blocks into a low power state to save energy."

SuggestedRemedy

1000BASE-KX shpuld be changes to 2.5GBAS-KXE

"The 1000BASE-KX PHY receiver should put unused functional blocks into a low power state to save energy."

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Should be worded:

"The 2.5GBASE-KX PHY receiver should put unused functional blocks into a low power state to save energy."

Cl **00** *SC* **0** *P* *L* # 166

Grow, Robert RMG Consulting

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

The inserts as specified by P802.3bz make worse the sort order mess that is currently the state of 1.4. 40GBASE terms in 2015 did not follow either the speed ordered port type list at the beginning of 1.4, nor insert after 2BASE-TL for at least the first digit being in sort order. 25GBASE terms were inserted by P802.3by before 40GBASE terms so at least the first digit of the port types somewhat sort. P802.3bz inserts start a third area for insert of port types in the area of 1BASE-TL, unfortunately, there is no predictable sort order in P802.3bz as the 5GBASE terms should follow 2BASE-TL to approximate IEEE sort order.

SuggestedRemedy

Unless another revision is completed prior to this amendmement (which would require significant editorial changes to the draft), it is probably best to follow P802.3bz. Please watch to see if order and numbering is changed when P802.3bz is published.

Response *Response Status* **C**

REJECT.
The insert point next to 802.3bz terms is correct for the current state of 1.4.
The order for 1.4 can be fixed at the next revision of standard 802.3.

Cl **00** *SC* **0** *P* **0** *L* **0** # 124

Slavick, Jeff Broadcom Limited

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

802.3by is an offiical standard

SuggestedRemedy

Change all the 802.3by-201x to 8023by-2016

Response *Response Status* **W**

ACCEPT.

Cl **00** *SC* **0** *P* **1** *L* **2** # 157

Grow, Robert RMG Consulting

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

This is typically where the list of amendments and corrigenda comprising the base document is listed. (See IEEE Std 802.3by page two or title page of P802.3bv/D3.0 for example.)

SuggestedRemedy

Copy list from P802.3bv, adding IEEE Std 802.3bv-20xx. Delete the list from line 25. Years should be of the form 20xx for projects not yet approved. The SASB teleconference is 22 Sept, so if D3.1 is not distributed before knowing the results, 802.3bn and 802.3bz might appropriately be 2016. Based on current schedules, this amendment is likely to be designated Amendment 10, so no other amendments need be considered for addition to the list at this time.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **1** *L* **2** # 152
Grow, Robert RMG Consulting

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

In publication, this is where the list of amendments and corrigenda comprising the base document being amended is listed. (See IEEE Std 802.3by page two or title page of P802.3bv/D3.0 for example.)

Based on current schedules, P802.3cb, could be be designated Amendment 10, 11 or 12. Questioning the schedule for P802.3cc when it is only at D1.0 argues against Amendment 12; and 802.3bs at the same initial WG ballot makes 10 or 11 a tossup, so the list or edits to the list certainly can be TBD. But, in addition, Corrigendum 1 will almost certainly be approved before this project is approved.

It is common to use 20xx as the year for yet to be approved projects. The SASB teleconference is 22 Sept, so if P802.3cb/D2.1 is not distributed before knowing the results, 802.3bn and 802.3bz might appropriately be 2016, but the corrigendum year and the year for 802.3bu and 802.3bv should be 20xx.

SuggestedRemedy

Could edit as in P802.3bv/D3.0 or indicate to be updated during publication preparation. If the list is added, delete the list at line 25.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note: editor to insert amendment numbers. .3bv to be assigned amendment 9 and move it after .3bu.
Amendment 6 through 8 magenta color turned to black.

Add TM after the amendent names (example: 802.3bzTM-20xx) for all occurrences in this list.]

Cl **00** *SC* **0** *P* **3** *L* **1** # 158
Grow, Robert RMG Consulting

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

Incomplete first sentence.

SuggestedRemedy

Delete the full stop and words: This amendment

Response *Response Status* **C**

ACCEPT.

Should read:
Abstract: This amendment to IEEE Std 802.3-2015 defines Ethernet Media…

Cl **00** *SC* **0** *P* **3** *L* **5** # 159
Grow, Robert RMG Consulting

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

It isn't common to add just speed to keywords.

SuggestedRemedy

Either delete speed keywords or expand to 2.5 Gigabit Ethernet, etc.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace 2.5 Gb/s and 5 Gb/s with
2.5 Gigabit Ethernet and 5 Gigabit Ethernet to the keywords list.

Cl **00** *SC* **0** *P* **8** *L* **18** # 154
Grow, Robert RMG Consulting

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

The WG ballot group is now known. It is thoughtful to allow members to review the appearance of their names in case there is any error in the database.

SuggestedRemedy

Add list that the WG Chair can provide, (he will probably remind you not to duplicate officer names in the added list).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Editor's note: chair to provide ballot group to editor.]

Cl **00** *SC* **0** *P* **8** *L* **19** # 160
Grow, Robert RMG Consulting

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

The WG ballot group is now known. It is thoughtful to allow members to review the appearance of their names in case there is any error in the database.

SuggestedRemedy

Add list that the WG Chair can provide, (he will probably remind you not to duplicate officer names in the added list).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Editor's note: duplicate of #154]

Cl **00** *SC* **0** *P* **10** *L* **3** # 161

Grow, Robert RMG Consulting

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

This box is published as part of the standard, so the self reference should be to the undated year of the standard.

SuggestedRemedy

Change P802.3cb to IEEE Std 802.3cb-20xx.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **10** *L* **26** # 153

Grow, Robert RMG Consulting

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

Draft uses both 201x and 20xx for yet to be approved standards and other year dates. While this project is unlikely to be subject to the uncertainty of the next decade, other projects getting started now face that possible uncertainty.

SuggestedRemedy

Use one form to simplify search by publication editor. I recommend 20xx as is used in IEEE boilerplate.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **11** *L* **13** # 155

Grow, Robert RMG Consulting

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

Update with current document descriptions.

SuggestedRemedy

I personally prefer adding the document list with draft numbers that were used when creating the draft in an Editor's note above this list as this is the first location where base text is drawn from preceding amendments and corrigenda. The Editor's note list on p. 25 does not provide sufficient information for this purpose.

From my most recent review updates to the list are appropriate:
p. 12, l. 42 hopefully publication editors will correct the grammar, other projects have deleted "for" to do that in their drafts;
p.11, l.26 the published standard includes Annex 109C in the description;
p.11, l.51 Physical Layer is the capitalization in P802.3bn/D3.2;
p.12, l.14 P802.3bu/D3.1 adds to the last line of the description; IEEE 802.3 single twisted-pair interfaces;
p.12, l.15 as you probably know, P802.3bv has been assigned Amendment 9 relocate description;
p.12, l.24 The P802.3bv/D3.0 description has been significantly changed. Update to: This amendment includes changes to IEEE Std 802.3-2015 and add clause 115 and Annex 115A. This amendment adds point-to-point 1000 Mb/s Physical Layer (PHY) specifications and management parameters for operation on duplex plastic optical fiber (POF) targeting use in automotive, industrial, home network and other applications.
p.12, l.35 Consider adding Corregigendum 1 description.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Editor's note: with the exception .bu and .bn descriptions be lifted from the latest drafts. Also add Corrigendum 1 to the list.

Use .bv as an example of where to place this and the needed content, based on 802.3cb's use of other drafts. It is also recommended that the particular draft used, be quoted with this information.]
[Also, can add an editor's note, in the draft, that states "This information may change for Sponsor Ballot."]

Cl **00** *SC* **0** *P* **11** *L* **26** # 162

Grow, Robert RMG Consulting

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

Update with current document descriptions.

SuggestedRemedy

I personally prefer adding the document list with draft numbers that were used when creating the draft in the Editor's note above as this is the first location where base text is drawn from preceding amendments and corrigenda. The Editor's note list on p. 25 does not include draft information.

From my most recent review updates to the list are appropriate:
p. 11, l. 26, add Annex 109C
p. 11, l. 46 hopefully publication editors will correct the grammar;
p. 11, l. 49 though almost certain to be approved in 2016, it is customary to list as 20xx until approval;
p. 12, l.4 though almost certain to be approved in 2016, it is customary to list as 20xx until approval;
p. 12, l. 24 description of 802.3bv has changed and it has been designated Amendment 9;
p. 12, l. 28 Corrigendum 1 is more likely to be on the list than 802.3bs, consider adding.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Editor's note: duplicate of #155]

Cl **00** *SC* **0** *P* **12** *L* **24** # 156

Grow, Robert RMG Consulting

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

Update with current document descriptions.

SuggestedRemedy

I personally prefer adding the document list with draft numbers that were used when creating the draft in an Editor's note above this list as this is the first location where base text is drawn from preceding amendments and corrigenda. The Editor's note list on p. 32 does not provide good information for this purpose.

From my most recent review updates to the list are appropriate:
p. 12, l. 42 hopefully publication editors will correct the grammar, other projects have deleted "for" to do that in their drafts;
p. 13, l. 8 add Amendment 8 802.3bu and Amendment 9 802.3bv. Also consider adding Corrigendum 1 as it is likely to preceed approval of this project.

Response *Response Status* **C**

REJECT.
Most amendments do not do this.

Cl **00** *SC* **0** *P* **26** *L* **4** # 163

Grow, Robert RMG Consulting

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

The amendment numbers for most of the listed documents have been established.

SuggestedRemedy

Update note to delete amendments assigned numbers. In the case of P802.3cb, P802.3bs and possibly P802.3cc are the only other amends likely to compete for Amendment #10.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note: replace list of ammendments with .bs and .cc]

Cl **00** *SC* **0** *P* **26** *L* **35** # 33

Anslow, Pete Ciena

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

Cross references to other parts of the 802.3 standard are not prefaced by "Clause", "subclause" or "Annex" unless they are to the first level heading.
Cross references to items in the P802.3cb draft should be live hyperlinks.
Cross references to other parts of the 802.3 standard that are not in the P802.3cb draft should be text with the character tag "External" applied.

SuggestedRemedy

Scrub the entire draft according to the principles outlined in the comment.
This means making at least the following changes:
Page 26 line 35, "Clause 127.2.4.1" should be "127.2.4.1" (Xref format "Section")
Page 34 line 7, "70.6.4" should be text with the character tag "External" applied
Page 34 line 37, "45.2.3.1" should be a hyperlink
Page 34 lines 38 to 41, "49.2", 55.3.6.3", "113.3.7.3", "126.3.7.3" should all be text with the character tag "External" applied
Page 53 lines 17, 18, and 19 "Clause 49", "Clause 49", and "Clause 82" should all be text with the character tag "External" applied
Page 57 line 10, "128A" and "130A" should be hyperlinks
Page 63 line 24 "Clause 36" should be text with the character tag "External" applied
Page 63 line 45, "clause 35" should be "Clause 35" and text with the character tag "External" applied
Page 66 line 28, "Clause 127.2.4.2" should be "127.2.4.2"
Page 69 line 30, "Clause 127.2.4.2" should be "127.2.4.2"
Page 78 line 14, "Clause 127.2.4.2" should be "127.2.4.2"
Page 125 line 20, "Clause 51.2" should be "51.2"
Page 125 line 47, "Clause 51.8" should be "51.8"
Page 126 line 14, "51.9" should be text with the character tag "External" applied
Page 128 line 11 "Clause 49" should be text with the character tag "External" applied
Page 135 line 48 "subclause 130.6.5" should be "130.6.5" and a cross-reference
Page 136 lines 21, 32 to 35, and 53, "Annex 31B", "Clause 45", "Table 130-2", "Table 130-3", and "Figure 130-1" should all be cross-references
Page 137 line 42, "Clause 78" should be a cross-reference
Page 140 lines 5, 22, and 23, "Table 130-4", "Equation (130-4)", and "Equation (130-5)" should all be cross-references
Page 143 lines 29, and 30, "Equation (130-5)", and "Equation (130-6)" should both be cross-references
Page 147 line 47, "130.7.2.1" should be a cross-reference
Page 149 lines 2 and 36, "Clause 130" should be a cross-reference in both places
Page 149 line 44, "Clause 21" should be text with the character tag "External" applied
Page 171 line 50, "92.8.3.7" should be text with the character tag "External" applied
Page 223 line 14, "Annex 128C.4.2" should be "128C.4.2"

Response *Response Status* **C**

ACCEPT.

Cl **1** *SC* **1.3** *P* **26** *L* **15** # 164

Grow, Robert RMG Consulting

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

The source for the document is possbily unknown for many readers.

SuggestedRemedy

Please add a footnote pointing to where to get the document.

Response *Response Status* **C**

REJECT.
[Editor's note: SFF is already used in the base standard.]

Cl **1** *SC* **1.4** *P* **16** *L* **19** # 165

Grow, Robert RMG Consulting

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

I doubt anyone could write the sort rules for 1.4. As the 802.3 dictionary that soon will have about 500 entries, the sort rules should be consistent, unfortunately, we broke that with 802.3u abandoning IEEE sort order and instead of adding 100 Mb/s before 10 Mb/s, we added it after starting us on a path to almost arbitrary and somewhat unpredictable order.

1BASE-T and 2BASE-TL were originally inserted in IEEE sort order. With 2.5G, we now have a unique challenge in resolving this because IEEE rules ignore spaces and non-alphanumeric characters. That means that 2.5G and 25G are treated the same (the decimal point ignored) so that terms beginning with 2.5G and 25G would be intermixed based on the following characters.

SuggestedRemedy

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **1** *SC* **1.4** *P* **26** *L* **27** # 210
Lusted, Kent Intel

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

there are definitions listed in the editorial note do not match that of the entries below.

SuggestedRemedy

list all entries in editing instructions or remove explicit reference to terms in editing instructions.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

List all entries in editing instructions.

Cl **1** *SC* **1.4** *P* **26** *L* **40** # 211
Lusted, Kent Intel

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

the definition for 5GBASE-R incorrectly references 10GBASE-R.

SuggestedRemedy

Consider changing "10GBASE-R" to "5GBASE-R" in 1.4.74a4

Response *Response Status* **W**

ACCEPT.

Cl **1** *SC* **1.4** *P* **26** *L* **50** # 212
Lusted, Kent Intel

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

The P802.3bs project is modifying the definition of BASE-R also.

The P802.3by-20xx project is P802.3-2016.

SuggestedRemedy

Add to editor note the dependency on P802.3bs changes to the definition of BASE-R.

Update reference to 802.3by with the published year.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change 201x to 2016 because 802.3.by is now published.

Add the following note:
This definition is being changed by 802.3bs in parallel.

Cl **1** *SC* **1.4** *P* **26** *L* **53** # 276
Donahue, Curtis UNH-IOL

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

"...Clause 49 or Clause 82, Clause 107, or Clause 129."

SuggestedRemedy

Remove the first "or" and add a "," so the sentence reads "...Clause 49, Clause 82, Clause 107, or Clause 129."

Response *Response Status* **C**

ACCEPT.

Cl **1** *SC* **1.4.107** *P* **26** *L* **49** # 168
Grow, Robert RMG Consulting

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

P802.3bs is also modifying this definition, if timelines hold true, this instruction and base text is correct.

SuggestedRemedy

Add an Editor's note to remind that 802.3bs is also modifying this definition and base text and editing instruction reference will have to be updated if 802.3bs is assigned a lower amendment number than 802.3cb.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note: use the following:
802.3bs is also modifying this definition and base text and editing instruction reference will have to be updated if 802.3bs is assigned a lower amendment number than 802.3cb.]

Cl **1** *SC* **1.4.74a6** *P* **26** *L* **46** # 167
Grow, Robert RMG Consulting

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

5GSEI should follow 5GBASE-T inserted by IEEE Std 802.3bz-20xx.

SuggestedRemedy

Add editing instruction referencing IEEE Std 802.3bz-20xx and renumber 5GSEI to 1.4.74c.

Response *Response Status* **C**

ACCEPT.
[Editor's note: comment #32 contains this and more.]

Cl **1** *SC* **1.4.74aa** *P* **26** *L* **21** # 32

Anslow, Pete Ciena

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

The first two editing instructions in 1.4 do not conform to the usual style.
There is no need to say "in alphanumerical order" as the position is explicit.
There is no need to say "and renumber" as re-numbering is not required for the amendment.
The list of definitions is incorrect.
"5GSEI" should be after "5GBASE-T".

SuggestedRemedy

Change the first editing instruction to: "Insert the new definition for 2.5GBASE-KX, before 1.4.74a 2.5GBASE-T (as inserted by IEEE Std 802.3bz-201x) as follows:"
Change the second editing instruction to: "Insert the five new definitions for 2.5GBASE-X, 2.5GPII, 2.5GSEI, 5GBASE-KR, and 5GBASE-R, after 1.4.74a 2.5GBASE-T (as inserted by IEEE Std 802.3bz-201x) as follows:"
Add a new editing instruction before the definition for "5GSEI": "Insert the new definition for 5GSEI after 1.4.74b 5GBASE-T (as inserted by IEEE Std 802.3bz-201x) as follows:"
Re-number "5GSEI" to be 1.4.74c

Response *Response Status* **C**

ACCEPT.

Cl **1** *SC* **1.4.74aa** *P* **26** *L* **25** # 14

Hajduczenia, Marek Charter Communicatio

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

"IEEE Std 802.3bs™-201x" is not marked as Amendment 8

SuggestedRemedy

Add "Amendment 8—" ahead of "This amendment includes changes to IEEE Std 802.3-2015 and adds Clause 116 through Clause 124" statement

Response *Response Status* **C**

REJECT.
Amendment 8 is 802.3bu, 802.3bs has not been assigned an amendment number.

Cl **1** *SC* **1.5** *P* **27** *L* **6** # 243

Baden, Eric Broadcom Limited

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

2.5GSEI line is missing period (".") at the end of sentence. Also 5GSEI

SuggestedRemedy

Fix them

Response *Response Status* **W**

ACCEPT.

Cl **30** *SC* **30.3.2.1.2** *P* **29** *L* **19** # 34

Anslow, Pete Ciena

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

The editing instructions in 30.3.2.1.2 and 30.3.2.1.3 need to state that the 2.5GBASE-T or 5GBASE-T entries were inserted by IEEE Std 802.3bz.
Also, incorrect subclause number in the second editing instruction in 30.3.2.1.3

SuggestedRemedy

Change the editing instructions in 30.3.2.1.2 to:
"Insert the following new entry in "APPROPRIATE SYNTAX" in 30.3.2.1.2 after the entry for 2.5GBASE-T (as inserted by IEEE Std 802.3bz-201x)".
"Insert the following new entry in "APPROPRIATE SYNTAX" in 30.3.2.1.2 after the entry for 5GBASE-T (as inserted by IEEE Std 802.3bz-201x)".
Change the editing instructions in 30.3.2.1.3 to:
"Insert the following new entry in "APPROPRIATE SYNTAX" in 30.3.2.1.3 after the entry for 2.5GBASE-T (as inserted by IEEE Std 802.3bz-201x)".
"Insert the following new entry in "APPROPRIATE SYNTAX" in 30.3.2.1.3 after the entry for 5GBASE-T (as inserted by IEEE Std 802.3bz-201x)".

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **30** *L* **10** # 35

Anslow, Pete Ciena

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

The entry for 2.5GBASE-T was not modified by .3bz, it was inserted by .3bz.
The 5G entries should be placed below "5GBASE-T"

SuggestedRemedy

In the two editing instructions, change "as modified by" to "as inserted by".
In the second editing instruction, change "2.5GBASE-T" to "5GBASE-T"

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **30** *L* **14** # 324

Donahue, Curtis UNH-IOL

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

"over undefined PMD". After reviewing other aMAUTypes, I can't find other instances of this langauge.

Also seen on page 30 line 20.

SuggestedRemedy

Fix this to match other aMAUType descriptions

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **30** *SC* **30.6.1.1.5** *P* **30** *L* **38** # 36

Anslow, Pete Ciena

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

The entries for 2.5GBASE-T and 5GBASE-T were not modified by .3bz, they were inserted by .3bz.
"in after the entry" doesn't make sense.

SuggestedRemedy

In the two editing instructions:
change "in after the" to "after the".
change "as modified by" to "as inserted by".

Response *Response Status* **C**

ACCEPT.

Cl **31B** *SC* **31B.3.7** *P* **155** *L* **35** # 60

Anslow, Pete Ciena

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

Editing instructions need improvement

SuggestedRemedy

Change the first editing instruction to: "Change the fifth and sixth paragraphs of 31B.3.7 (as inserted by IEEE Std 802.3bz-201x) as follows:"
Change the second editing instruction to: "Insert a new paragraph in 31B.3.7 immediately after the paragraph starting “2.5 Gb/s (using 2.5GBASE-T) ” (as inserted by IEEE Std 802.3bz-201x) as follows:"
Change the third editing instruction to: "Insert a new paragraph in 31B.3.7 immediately after the paragraph starting “5 Gb/s (using 5GBASE-T) ” (as inserted by IEEE Std 802.3bz-201x) as follows:"
Remove the underline from "5 Gb/s (not using 5GBASE-T) - max_overrun = 768+ frame_length" since the insert editing instruction does not use underline.

Response *Response Status* **C**

ACCEPT.

Cl **31B** *SC* **31B.4.3** *P* **156** *L* **7** # 61

Anslow, Pete Ciena

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

Inserting the two new rows as items *MIIcc and *MIIcd will result in the table no longer being in speed order as it is currently and also not showing the BASE-T variants after the others as currently.
Similarly for 31B.4.6

SuggestedRemedy

Change editing instruction in 31B.4.3 to: "Insert a new row for *MIIcaa before the row for *MIIca (as inserted by IEEE Std 802.3bz-201x) and a new row for *MIIca1 before the row for *MIIcb (as inserted by IEEE Std 802.3bz-201x) in the table in 31B.4.3 as follows (unchanged rows not shown):"
Renumber items accordingly.
Change editing instruction in 31B.4.6 to: "Insert a new row for TIM4aa before the row for TIM4a (as inserted by IEEE Std 802.3bz-201x) and a new row for TIM4a1 before the row for TIM4b (as inserted by IEEE Std 802.3bz-201x) in the table in 31B.4.6 as follows (unchanged rows not shown):"
Renumber items accordingly.

Response *Response Status* **C**

ACCEPT.

Cl **31B** *SC* **31B.4.3** *P* **156** *L* **13** # 62
Anslow, Pete Ciena

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

Item TIM4c has "with PHY type other than 2.5GBASE-T" but item *MIIcc has "with PHY types of 2.5GBASE-KX".
These should be consistent with each other. The former seems preferable as a list of all other PHY types may become lengthy.

SuggestedRemedy

Change *MIIcc to "At operating speeds of 2.5 Gb/s with PHY types other than 2.5GBASE-T"
Change *MIIcd to "At operating speeds of 5 Gb/s with PHY types other than 5GBASE-T"

Response *Response Status* **C**

ACCEPT.

Cl **31B** *SC* **31B.4.6** *P* **156** *L* **28** # 325
Donahue, Curtis UNH-IOL

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

Rows are missing divider.

SuggestedRemedy

Add divider between rows.

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1** *P* **31** *L* **16** # 37
Anslow, Pete Ciena

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

There are two register name changes

SuggestedRemedy

In the editing instruction change: "name of the register" to "names of the registers"

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.1.5** *P* **31** *L* **31** # 38
Anslow, Pete Ciena

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

Editing instructions should be specific as to the location of the modification and should not try to capture the change in the text.

SuggestedRemedy

Change the editing instruction to: "Change the second sentence of 45.2.1.1.5 as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.1.5** *P* **31** *L* **31** # 217
McClellan, Brett Marvell

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

per 129.3.3 5GBASE-R has an option PMA loopback enabled by 1.0.0

SuggestedRemedy

page 31 line 31 and 33 change "2.5GBASE-KX" to "2.5GBASE-KX, 5GBASE-R"

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.6** *P* **31** *L* **38** # 169
Grow, Robert RMG Consulting

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

P802.3bs is defining bit 6 to expand the number space. It currently has these two values (with a leading 0) listed as reserved.

SuggestedRemedy

Might want to add an editors note specific to this one indicating that this fact and that amendment order will not only require changes to the editing instruction, but also to the base text if P802.3bs is assigned a lower amendment number. If this project is assigned a lower amendment number, then the reserced rows in P802.3bs will have to carry these values to prevent them being accidently removed.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Editor's note: base text to be reviewed when amendment numbers are assigned to either .bs or .cb.]

Cl **45** *SC* **45.2.1.6** *P* **31** *L* **48** # 39
Anslow, Pete Ciena

Comment Type **T** *Comment Status* **A**
Most other entries in this table end "PMA/PMD", e.g. "10GBASE-KR PMA/PMD"

SuggestedRemedy
Change "5GBASE-KR" to "5GBASE-KR PMA/PMD"
Change "2.5GBASE-KX" to "2.5GBASE-KX PMA/PMD"

Response *Response Status* **C**
ACCEPT.

Cl **45** *SC* **45.2.1.7.4** *P* **32** *L* **6** # 40
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
Reference to 802.3bz is garbled in 45.2.1.7.4, 45.2.1.7.5, and 45.2.1.8

SuggestedRemedy
In the editing instructions in 45.2.1.7.4, 45.2.1.7.5, and 45.2.1.8 change:
"IEEE802.3-201x Std 802.3bz" to:
"IEEE Std 802.3bz-201x"

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

In the editing instructions in 45.2.1.7.4, 45.2.1.7.5, and 45.2.1.8 change:
"IEEE802.3-201x Std 802.3bz" to:
"IEEE Std 802.3bz-2016"

Cl **45** *SC* **45.2.1.14c** *P* **32** *L* **50** # 41
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
The editing instruction needs to state where Table 45-17c can be found.
Given the underlining of the new rows in the table (which are only appropriate for a "change" editing instruction) it is simplest to make the editing instruction a simple "change".

SuggestedRemedy
Change the editing instruction to: "Change the row for 1.21.15:2 in Table 45-17c (as inserted by IEEE Std 802.3bz-201x) as follows (unchanged rows not shown):

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Change the editing instruction to: "Change the row for 1.21.15:2 in Table 45-17c (as inserted by IEEE Std 802.3bz-2016) as follows (unchanged rows not shown):

Cl **45** *SC* **45.2.1.14c.a** *P* **33** *L* **12** # 42
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
"Std" and a space missing in the editing instruction.

SuggestedRemedy
change "by IEEE 802.3bz-201x)as" to "by IEEE Std 802.3bz-201x) as"

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Global replace:
802.3bz-201x with 802.3bz-2016
and
802.3by-201x with 802.3by-2016.

Cl **45** *SC* **45.2.1.88** *P* **33** *L* **28** # 174
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **E** *Comment Status* **A**
Here, MDIO register names for 1.160 and 1.160 are changed. Those register names also appear in Table 70-2 and Table 70-3 in clause 70.5, but editing instructions are missing.

SuggestedRemedy
Provide editing instructions to change register names in Table 70-2 and Table 70-3 in clause 70.5 so that the PMA/PMD register names are consistent.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Pull in Clause 70.5 into our .cb draft and change control and status register names in Table 70-2 and Table 70-3. Provide the editing instructions.
Note: this comment is on Clause 70, not Clause 45.
[Editor's note: file 802.3-2015_SECTION5.pdf]

Cl **45** *SC* **45.2.1.88** *P* **33** *L* **32** # 43
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
"." missing from the end of the sentence.

SuggestedRemedy
Add "."

Response *Response Status* **C**
ACCEPT.

Cl **45** *SC* **45.2.3.7.a** *P* **35** *L* **49** # 244
Baden, Eric Broadcom Limited

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

Two issues -- first issue: formatting - 45.2.3.7a refers to Table 45-124a, but Table 45-123 is placed between the edit instruction and the referred table.

SuggestedRemedy

1) move Table 45-123 before 45.2.3.7a

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.3.7.a** *P* **36** *L* **23** # 245
Baden, Eric Broadcom Limited

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

Second issue: Edit instruction says "insert" but the Table 45-124a shows five rows, four without any revision marks. BTW revision marks are not allowed for "insert" instruction.

SuggestedRemedy

Change the edit instruction to "modify", and note inserted lines 3.9.3 and 3.9.2.

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.3.7a** *P* **35** *L* **15** # 15
Hajduczenia, Marek Charter Communicatio

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

Rows in Table 45–124a modified (added) by this project are not marked in underline

SuggestedRemedy

Mark rows for bits 3.9.3 and 3.9.2

Response *Response Status* **C**

ACCEPT.

[Editor's note: the lines that are being inserted must have an underline.]

Cl **45** *SC* **45.2.3.7a** *P* **35** *L* **21** # 213
Lusted, Kent Intel

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

table 45-124a entries for bits 3.9.2 and 3.9.3 are not underlined (per IEEE style guide) to indicate insertions per editing instructions

SuggestedRemedy

Underline as necessary

Response *Response Status* **W**

ACCEPT.

Same as comment #15.

Cl **45** *SC* **45.2.3.7a** *P* **35** *L* **21** # 202
Lusted, Kent Intel

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

table 45-125a entries for bits 3.21.8 and 3.21.7 are not underlined (per IEEE style guide) to indicate insertions per editing instructions

SuggestedRemedy

Underline as necessary

Response *Response Status* **W**

ACCEPT.

Same as comment #15.

Cl **45** *SC* **45.2.3.7a.a** *P* **35** *L* **34** # 44
Anslow, Pete Ciena

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

There is no editing instruction for 45.2.3.7a.a or 45.2.3.7a.b.
For the moment, assume that P802.3bs is ahead of P802.3cb as per the editing instruction on page 34, line 52. If P802.3cb moves ahead of P802.3bs, this will need to change.

SuggestedRemedy

Add the editing instruction: "Insert 45.2.3.7a.a and 45.2.3.7a.b before 45.2.3.7a.1 (as inserted by IEEE Std 802.3bs-201x) as follows:"

Response *Response Status* **C**

ACCEPT.

Same as comment #16.

Cl **45** *SC* **45.2.3.7a.a** *P* **35** *L* **34** # 16

Hajduczenia, Marek Charter Communicatio

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

No editorial instructions for 45.2.3.7a.a and 45.2.3.7a.b

SuggestedRemedy

Insert editorial instructions before 45.2.3.7a.a

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add editing instructions as shown:
Insert 45.2.3.7a.a and 45.2.3.9a.b after 45.2.3.7a.1 (as inserted by IEEE Std 802.3bs-201x) as follows:

Cl **45** *SC* **45.2.3.9a** *P* **36** *L* **3** # 45

Anslow, Pete Ciena

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

The draft is inconsistent as to what is assumed concerning the order of approval of the P802.3bs and P802.3cb drafts.
In 45.2.3.7a it is assumed that the P802.3bs draft is first, here the changes due to P802.3bs are not shown.

SuggestedRemedy

Make the draft consistent as to whether P802.3bs is assumed to be before P802.3bs or after.
If it is assumed that P802.3bs is approved first, take account of the changes to Table 45-125a being made by the P802.3bs draft.
Also there is a space missing in "3.21.6:3in".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

We assume this project will have a lower amendment number than 802.3bs.

"3.21.6:3in" will be changed to
"3.21.6:3 in". (space added)

Cl **45** *SC* **45.2.3.9a** *P* **36** *L* **7** # 17

Hajduczenia, Marek Charter Communicatio

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

Rows in Table 45–125a modified (added) by this project are not marked in underline

SuggestedRemedy

Mark rows for bits 3.21.8, 3.21.7, and 3.21.6:3 - they are being added

Response *Response Status* **C**

ACCEPT.

Same as comment #15.

Cl **45** *SC* **45.2.3.14.3** *P* **37** *L* **43** # 18

Hajduczenia, Marek Charter Communicatio

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

Please make sure that "/" is not used for hyphenation

SuggestedRemedy

Alternatively, place a forced line break ahead of: "5/10/25/40/100GBASE-R" to make sure that designators are not broken across lines

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.7.2.1** *P* **38** *L* **28** # 46

Anslow, Pete Ciena

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

"more than one of 1000BASE-KX, or 2.5GBASE-KX, or 10GBASE-KX4 PMAs" doesn't need two "or"s

SuggestedRemedy

Remove the first of the two "or"s

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.7.12** *P* **38** *L* **38** # 19
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
Rows in Table 45–209 modified (added) by this project are not marked in underline

SuggestedRemedy
Mark rows for bits 7.48.15 and 7.48.14
Similar changed in Table 45–211aa and Table 45–211ab

Response *Response Status* **C**
ACCEPT.

Same as comment #15.

Cl **45** *SC* **45.2.7.14aa** *P* **39** *L* **25** # 326
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
In the description column of the third row in Table 45-211aa, "2.5GBASE-KR". This should be "2.5GBASE-KX".

SuggestedRemedy
Change to "2.5GBASE-KX".

Response *Response Status* **C**
ACCEPT.

Cl **45** *SC* **45.5** *P* **41** *L* **2** # 47
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
The heading for 45.5 should include a copyright release footnote.

SuggestedRemedy
Add the footnote

Response *Response Status* **C**
ACCEPT.

Copy from base spec: 802.3 volume 4:

1Copyright release for PICS proformas: Users of this standard may freely reproduce the PICS proforma in this subclause so that it can be used for its intended purpose and may further publish the completed PICS.
<<PARTIALLY IMPLEMENTED>>

[Editor's note: framemaker help needed]

Cl **45** *SC* **45.5.3.1** *P* **41** *L* **28** # 327
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
In the status column, one of the values is "5GKX:M". This should be "5GKR:M".

SuggestedRemedy
Change to "5GKR:M".

Response *Response Status* **C**
ACCEPT.

Cl **45** *SC* **45.5.3.1** *P* **41** *L* **28** # 48
Anslow, Pete Ciena

Comment Type **T** *Comment Status* **A**
In item MM124, Status "2.5GKX:M 5GKX:M KX:M KX4:M KR:M", "5GKX:M" should be "5GKR:M"

SuggestedRemedy
Change "5GKX:M" to "5GKR:M"

Response *Response Status* **C**
ACCEPT.

Cl **45** *SC* **45.5.3.6** *P* **41** *L* **35** # 49
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
There are no editing instruction for items "*2.5GX" or "*5GR"

SuggestedRemedy
Add an editing instruction for items "*2.5GX" and "*5GR"

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Add:
"Change the following PCS row by adding 2.5GX and 5GX as shown below (unchanged rows not shown):"

Cl **69** *SC* **69.1.1** *P* **43** *L* **16** # 328
Donahue, Curtis UNH-IOL

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

"...1000 Mb/s, 2.5Gb/s, 5 Gb/s, 10 Gb/s,..." There should be a space in "2.5Gb/s".

SuggestedRemedy

Change to "2.5 Gb/s".

Response *Response Status* **C**

ACCEPT.

Cl **69** *SC* **69.1.1** *P* **43** *L* **16** # 50
Anslow, Pete Ciena

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

Space missing in "2.5Gb/s" and comma missing in base text after "25 Gb/s" on line 17

SuggestedRemedy

change to "2.5 Gb/s" and add comma after "25 Gb/s" on line 17

Response *Response Status* **C**

ACCEPT.

Cl **73** *SC* **73.2** *P* **47** *L* **33** # 329
Donahue, Curtis UNH-IOL

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

In Figure 73-1, just under the MEDIUM symbol it says "1 Gb/s, 2.5Gb/s, 5Gb/s, 10 Gb/s, 25Gb/s, 40 Gb/s or 100 Gb/s". Should read "1 Gb/s, 2.5 Gb/s, 5 Gb/s, 10 Gb/s, 25 Gb/s, 40 Gb/s or 100 Gb/s".

SuggestedRemedy

Add spaces so it reads "1 Gb/s, 2.5 Gb/s, 5 Gb/s, 10 Gb/s, 25 Gb/s, 40 Gb/s or 100 Gb/s".

Note: The "25Gb/s" was added to this diagram by P802.3by but in that draft it is properly inserted as "25 Gb/s".

Response *Response Status* **C**

ACCEPT.

Cl **73** *SC* **73.3** *P* **47** *L* **46** # 215
Marris, Arthur Cadence Design Syst

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

Editorial instruction should be change rather than insert

SuggestedRemedy

Add text "Change third paragreaph as follows" or something similar.

Also fix in 73.6.4 and 73.7.4.1

Response *Response Status* **C**

ACCEPT.

Cl **73** *SC* **73.3** *P* **47** *L* **46** # 51
Anslow, Pete Ciena

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

Since underline is used to show the changes, this has to be a "change" editing instruction.
Same issue for the second editing instruction in 73.6.4.
IEEE Std 802.3by-2016 is now published.
In the last editing instruction for 73.6.4, "paragraphs" should be "paragraph"

SuggestedRemedy

Change the editing instruction for 73.3 to: "Change the third paragraph of 73.3 (as modified by IEEE Std 802.3by-2016) as follows:"
Change the second editing instruction for 73.6.4 to: "Change the third paragraph of 73.6.4 (as modified by IEEE Std 802.3by-2016) as follows:"
In the last editing instruction for 73.6.4, change "paragraphs" to "paragraph"

Response *Response Status* **C**

ACCEPT.

Same as comment #15.

Cl **73** *SC* **73.7.4.1** *P* **49** *L* **52** # 52
Anslow, Pete Ciena

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

Since underline is used to show the changes, this has to be a "change" editing instruction.

SuggestedRemedy

Change the editing instruction to: "Change 73.7.4.1 as follows:"

Response *Response Status* **C**

ACCEPT.

Same as comment #15.

Cl **73** *SC* **73.10.1** *P* **48** *L* **13** # 131
Smith, Daniel Seagate

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

SuggestedRemedy
correct spelling for this term?

Proposed Response *Response Status* **Z**
REJECT.

This comment was WITHDRAWN by the commenter.

Cl **73** *SC* **73.10.1** *P* **49** *L* **44** # 53
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
Since the editing instruction says "Change the list of variables" the entire list has to be shown as per IEEE Std 802.3by-2016.

SuggestedRemedy
Either show the entire list or change this to an "insert" editing instruction (which does not use the underline font to show the insertion) and remove the other rows.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Change this to an 'insert' editing instruction.

Cl **73** *SC* **73.11.4.4** *P* **51** *L* **5** # 214
Lusted, Kent Intel

Comment Type **TR** *Comment Status* **D**
PICS is missing change to Std 802.3-2015 Clause 73.11.4.4 PICS entry RF5 for 2.5GBASE-KX parallel detection

SuggestedRemedy
Change PICS entry for RF5 to include 2.5GBASE-KX

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

PICS entry for RF5 to include 2.5GBASE-KX and associated editing instructions.

[Editor's note: I imported new section 73.11.4.4 from Std 802.3-2015]

Cl **78** *SC* **78** *P* **53** *L* **1** # 123
Trowbridge, Steve Nokia

Comment Type **T** *Comment Status* **A**
The discussion in the P802.3cd project concluded that EEE deep sleep mode was too complex and nobody uses it, so decided not to extend it to 50G or 200G operation

SuggestedRemedy
Consider whether deep sleep support can be omitted from EEE for P802.3cb

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

We considered Deep Sleep.
No change needed.

Cl **78** *SC* **78.1.1** *P* **53** *L* **18** # 125
Slavick, Jeff Broadcom Limited

Comment Type **TR** *Comment Status* **A**
The change from "these" to a list of Clauses didn't keep the entire list.

SuggestedRemedy
Add Clause 107 to the list of Clauses can generate RX_LPI_ACTIVE

Response *Response Status* **W**
ACCEPT.

Cl **78** *SC* **78.1.1** *P* **53** *L* **19** # 54
Anslow, Pete Ciena

Comment Type **T** *Comment Status* **A**
The base text says "Additionally these PCS types generate the RX_LPI_ACTIVE signal …" Where "these PCS types" are the Clause 49 PCS, Clause 107 PCS, and Clause 82 PCS. Now the text has been changed to make the types specific, the Clause 107 PCS is missing from the list.

SuggestedRemedy
Add the Clause 107 PCS to the list.

Response *Response Status* **C**
ACCEPT.

Cl **78** *SC* **78.1.4** *P* **53** *L* **51** # 170

Grow, Robert RMG Consulting

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

Please note that P802.3bz/D3.3 as submitted to RevCom properly inserts content into Table 1 considering the insert of P802.3bp, but failed to update the editing instructions for Tables 78.2 and 78-4 similarly. P802.3bv is also inserting three port types into all three tables. Unless IEEE Std 802.3bz corrects this problem, during publication preparation, the 2.5G and 5G values in Tables 2 and 4 will be inserted in the midst of 1000BASE-terms.

SuggestedRemedy

While insert relative to is fine, you need to encourage publication editors to correct the order problem in P802.3/D3.3 or this project will compound the problem.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The publication editors did fix the bz problems.

Cl **125** *SC* **125** *P* **55** *L* **8** # 55

Anslow, Pete Ciena

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

Clause 125 is not in IEEE Std 802.3-2015, so the reader needs some help to find it in the 9 amendments that precede 802.3cb.
However, there are 9 editing instructions in Clause 125 and it is cumbersome to add "(as inserted by IEEE Std 802.3by-2016)" to all of them.
This problem was encountered by the IEEE Std 802.3bm-2015 amendment of Clause 91 and the solution adopted during publication was to add: "Note that Clause 91 was introduced by IEEE Std 802.3bj-2014." before the first heading for Clause 91.

SuggestedRemedy

Add "Note that Clause 125 was introduced by IEEE Std 802.3bz-201x." above the Clause 125 heading.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add "Note that Clause 125 was introduced by IEEE Std 802.3bz-2016." above the Clause 125 heading.

Cl **125** *SC* **125.1.3** *P* **55** *L* **47** # 122

Trowbridge, Steve Nokia

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

Unclear what the justification is for selecting different coding (10B or 66B) for 2.5G and 5G in this project. In the P802.3bz project, they are the same (66B equivalent, encoded as 65B omitting the redundant sync header bit since the alignment of blocks is determined by position in the LDPC parity frame). While it isn't likely, for example, that a 2.5G backplane interface targeted at storage networks would be interconnected with a 2.5GBASE-T interface across a transport network, this departs from the recent trend to have a consistent coding for each PHY rate and makes 2.5GBASE-X an "outlier" in the family of 2.5G and 5G PHYs using a unique line coding

SuggestedRemedy

Either use 66B coding for the 2.5G backplane interface, or provide a clear technical rationale for why this interface required a different line coding

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Technical Rational is outlined in William Lo's presentation, http://www.ieee802.org/3/cb/public/mar16/Lo_3cb_01a_0316.pdf

Baseline adopted by motion #1 in March 16, 2016.

Cl **125** *SC* **125.1.4** *P* **57** *L* **23** # 117

D'Ambrosia, John Futurewei, Subsidiary

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

Table 125-2 notes that autonegotiation is optional for 2.5GBASE-KX, however, in 73.3 it is stated that AN shall interact with PHYs. No note was found indicating that AN is optional to implement, but shall be implemented per Clause 73 if implemented.

SuggestedRemedy

Change entry in table for Row 2.5GBASE-KX to indicate that Clause 73 FEC is M

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change entry in table for Row 2.5GBASE-KX to indicate that Clause 73 Auto-Negotiation is M.

Cl **125** *SC* **125.2.2** *P* **57** *L* **33** # 56

Anslow, Pete Ciena

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

The editing instructions in 125.2.2 and 125.2.3 do not conform to the usual style.

SuggestedRemedy

Change the editing instruction for 125.2.2 to: "Insert the following paragraph at the end of 125.2.2:"
Change the editing instruction for 125.2.3 to: "Insert the following paragraph at the end of 125.2.3:"

Response *Response Status* **C**

ACCEPT.

Cl **125** *SC* **125.3** *P* **58** *L* **10** # 57

Anslow, Pete Ciena

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

The editing instruction does not match the changes made to the table (and it should not try to describe the changes in detail).

SuggestedRemedy

Change to "Change Table 125-3 as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **125** *SC* **125.3** *P* **58** *L* **11** # 277

Donahue, Curtis UNH-IOL

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

The insert instruction and added rows in Table 125-3 have errors, and the instructions weren't followed.

SuggestedRemedy

1) Change the instruction to read "Change Table 125-3 by inserting four rows, one each for 2.5GBASE-X PCS/PMA, 2.5GBASE-KX PMD, 5GBASE-R PCS/PMA, 5GBASE-KR PMD, as shown, and change the associated notes a and b as shown."

2) Change the value in the third row of the Sublayer column to "2.5GBASE-KX PMD". Add a row above "2.5GBASE-KX PMD", in the Sublayer column use "2.5GBASE-X PCS/PMA". Fill remaining columns with appropriate values.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the instruction to read:
"Change Table 125-3 by inserting three rows, one each for 2.5GBASE-KX PHY, 5GBASE-R PCS/PMA, 5GBASE-KR PMD, as shown, and change the associated notes a and b as shown."

This change is consistant with the last Task Force comment resolution.

Cl **127** *SC* **127** *P* **59** *L* **1** # 58

Anslow, Pete Ciena

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

There is no editing instruction for Clauses 127 to 130

SuggestedRemedy

Add a new editing instruction above the heading foe Clause 127: "Insert new Clauses 127 to 130 and corresponding new Annexes 127A to 130B as follows:"

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.1.1** *P* **59** *L* **10** # 278

Donahue, Curtis UNH-IOL

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

"2.5Gb/s

SuggestedRemedy

Change to "2.5 Gb/s"

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.1.1** *P* **59** *L* **15** # 279

Donahue, Curtis UNH-IOL

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

"(may include MDI)". This language seems odd, would you ever not include the MDI? Clause 36 (1000BASE-X PCS) is very similar to this paragraph but says "(including MDI)".

SuggestedRemedy

Change "(may include MDI)" to "(including MDI)".

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.1.2** *P* **60** *L* **16** # 121

Trowbridge, Steve Nokia

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

The left side of the PMD box is "off" in the figure - depending on magnification, it can appear that that box is narrower than the rest of the stack, or perhaps the line width at the left is narrower than that of the rest of the boxes in the stack

SuggestedRemedy

Adjust the width or the box or the line width to aligne the appearance with the rest of the stack

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.1.3.1** *P* **60** *L* **43** # 280

Donahue, Curtis UNH-IOL

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

This sentence has some typos.

SuggestedRemedy

Remove extra "." and make "Encoding" lowercase. Should read "... PHY implementations. The 2.5GBASE-X PCS provides all services required by the XGMII including encoding (decoding) of the XGMII ..."

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.2** *P* **62** *L* **48** # 332

Law, David HPE

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

Subclause 127.2.2 'Functions within the PCS' states that 'The Word Encode process continuously generates four 2.5GPII symbols based upon the TXD <31:0> and TXC <3:0> signals on the XGMII, sending them to the Word-to-Octets process.' however according to Figure 127–2 'Functional block diagram' and the TX_XGMII state of Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram' the Word Encode process generates four 2.5GPII symbols along with an associated 4 bits of transmit enable and 4 bits of transmit error.

SuggestedRemedy

Suggest that 'The Word Encode process continuously generates four 2.5GPII symbols based upon the TXD <31:0> and TXC <3:0> signals on the XGMII, sending them to the Word-to-Octets process.' should be changed to read 'The Word Encode process continuously generates four 2.5GPII symbols (tpd<3:0><7:0>), and associated 4 bits of transmit enable (tp_en<3:0>) and 4 bits of transmit error (tp_er<3:0>), based upon the TXD <31:0> and TXC <3:0> signals on the XGMII, sending them to the Word-to-Octets process.'.

Additionally suggest that the text 'The Word-to-Octets process takes the four 2.5GPII symbols and outputs them one 2.5GPII symbol at a time to the PCS Transmit Process.' be changed to read 'The Word-to-Octets process takes the four 2.5GPII symbols, and associated transmit enable and transmit error, and transmits one 2.5GPII symbol and its associated transmit enable and transmit error at a time to the PCS Transmit Process across the 2.5GPII.'.

Response *Response Status* **C**

ACCEPT.
[Editor's note: I also changed the 2 instances of '4 bits' to 'four bits' in the suggested remedy.]

Cl **127** *SC* **127.2.4** *P* **63** *L* # 356

Kim, Yong Broadcom

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

XGMII is the adopted interface for 2.5G, and the baseline for the 2.5G Backplane signalling is compatible with 1000BASE-KX (and possibly propriatary SGMII in broad use) running at 2.5X speed-up. It is highly desireable to make features that were not present at 1G, but present at 2.5G due to adoption of XGMII (10G) runing at 1/4 speed, to be optional.

SuggestedRemedy

A bit broad reaching changes.

Requres ordered set transmit for link status to be optional.

127.2.5.6 Sequence /Q/ clause need to indicate optional implementation;

127.2.6.2.2 Transmit needs to say "if the optional link status signalling is enabled…"

And Annex 127B should be expanded to make this clear. Please refer to the presentation WRT to this comment, to be submited for Sept 2016 Interim.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note: This is a Technical but not Required comment.

Need help understanding the specific changes needed.]

See Kim_3cb_01_0916.pdf for detailed changes.

Vote to Accept in Principle
approve: 4
oppose: 1
abstain: 2
Approved.

[Editor's note: file located at: http://www.ieee802.org/3/cb/public/sep16/index.html]

Cl **127** *SC* **127.2.4.1** *P* **63** *L* **38** # 281

Donahue, Curtis UNH-IOL

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

Subclause title is "2.5Gb/s PCS Internal Interface (2.5GPII)". Should be a space in "2.5Gb/s".

SuggestedRemedy

Change to "2.5 Gb/s PCS Internal Interface (2.5GPII)".

Also, "2.5Gb/s" in first sentence of the following paragraph, change that as well.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.1** *P* **63** *L* **53** # 333

Law, David HPE

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

There are two instances in subclause 127.2.4.1 '2.5Gb/s PCS Internal Interface (2.5GPII)' where a it is stated that 'The nominal rate of operation is ..' however a time, not a rate, is specified.

In addition in response to comment i-77 of on the initial sponsor ballot of IEEE P802.3bz/D3.0 the clock precision for the XGMII clock defined in subclause 46.3.1.1 was changed from +/-0.01% to +/- 100ppm. While 0.01% and 100 ppm are equivalent I believe that the use of ppm is more common when defining clock precision in IEEE 802.3.

SuggestedRemedy

Suggest that on page 63, line 53 the text ' The nominal rate of operation is 12.8ns +/- 0.01%.' should be changed to read 'The nominal rate of operation is 78.125 Msymbols/s +/- 100pm.' and that 'The nominal rate of operation of the single 2.5GPII symbol is 3.2ns +/- 0.01%.' be changed to read ' The nominal rate of operation of the 2.5GPII is 312.5 Msymbols/s +/- 100ppm.'.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
(the original had '100pm' instead of '100ppm')

Suggest that on page 63, line 53 the text ' The nominal rate of operation is 12.8ns +/- 0.01%.' should be changed to read 'The nominal rate of operation is 78.125 Msymbols/s +/- 100ppm.' and that 'The nominal rate of operation of the single 2.5GPII symbol is 3.2ns +/- 0.01%.' be changed to read ' The nominal rate of operation of the 2.5GPII is 312.5 Msymbols/s +/- 100ppm.'.

Cl **127** *SC* **127.2.4.1** *P* **64** *L* **5** # 334

Law, David HPE

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

Table 127-1 and 127-2 both list 'Data X' as an 'abbreviation' for the permissible encoding 1, 0, 0x00 to 0xFF. The only other uses of 'Data X' I can find are in Table 127–3 'Word Encode mapping' Table 127–4 'Word Decode mapping' where it is used in relation to the XGMII but I don';t think they are related. As an aside, I think an abbreviation is usual a shorter form of a word or phrase, therefore not sure that 'Data X' is an abbreviation of the word 'Data'.

SuggestedRemedy

Since it seems it is not used, suggest that the 'abbreviation' 'Data X' be removed from Table 127-1 and 127-2.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change 'Abbreivation' in right-hand column of Table 127-1 and Table 127-2 to read 'Mnemonic'. In this column, change 'IDLE' to 'Idle'.
>>done

Grant the editor license to develop text to clarify Table 127-3 XGMII coumns match Table 46-3. Table 127-3 wen_encode_state column should not be a part of XGMII nor 2.5GPII. [Editor's note: please supply text]

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **1** # 219

McClellan, Brett Marvell

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

in table 127-1 the abbreviation for Normal Interframe is shown as "IDLE", not "Idle" as used in table 127-3 in the 2.5GPII Columns

SuggestedRemedy

Change "Idle" to "IDLE" in the 2.5GPII Columns

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **3** # 371

Law, David HPE

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

I believe for correct operation 'data B/Err' in Table 127-3 means that if that lane 1 is Data or Error, so long as all other lanes are Data or Error, the 2.5GPII should either convey the Data value B or the Error encoding. The independence of this from each lane isn't entirely obvious from first reading of the table.

SuggestedRemedy

Suggest it might be clearer to change 'Data A/Err' to 'Data A or Err', 'Data B/Err' to 'Data B or Err', 'Data C/Err' to 'Data C or Err' and 'Data D/Err' to 'Data D or Err'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **5** # 218

McClellan, Brett Marvell

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

need to show that wencode_state in the last column is the next value of wencode_state

SuggestedRemedy

change wencode_state in column 5 to wencode_state<n>
change wencode_state in the last column to wencode_state<n+1>
or
do not change wencode_state in column 5
change wencode_state in the last column to wencode_state_next

Response *Response Status* **C**

ACCEPT.

change wencode_state in column 5 to wencode_state
(n)
and,
change wencode_state in the last column to wencode_state
(n+1)
[Editor note: this relates to David Law's comment. He changing much of the table.]

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **7** # 372

Law, David HPE

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

While widely understood as meaning don't care suggest that the text 'X' should be changed to read 'Don't care' in the leftmost wencode_state column of Table 127-3 and 127-4 as well as the seq_s2s3 column of Table 127-4.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **12** # 373

Law, David HPE

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

The format for the abbreviation for 2.5GPII according to Table 127–1 'Permissible encodings of tpd<7:0>, tp_en, tp_er at 2.5GPII' is 'Data X'.

SuggestedRemedy

Suggest that '0x55 Data' should be changed to read 'Data 0x55' in Table 127–3.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **29** # 221

McClellan, Brett Marvell

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

/W/ is used prior to definition

SuggestedRemedy

add a reference to the definition

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note: reference is 127.2.6.1.2]

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **29** # 220

McClellan, Brett Marvell

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

following the notation of Clause 48, a sequence ordered set is noted as ||Q||, not |Q|.
also line 30 missing comma after Seq
also line 54, should |W| be /W/ instead?

SuggestedRemedy

line 29 change |Q| to ||Q||
line 30 change "Seq, Data S0, Seq Data S1," to "Seq, Data S0, Seq, Data S1,"
line 54 change |W| to /W/.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **31** # 282

Donahue, Curtis UNH-IOL

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

In this paragraph there are 2 instances of "Sequence" (capital "S") when it should be "sequence" (lowercase "s"). Changing these to lowercase would also make them consistant with other instances in this subclause.

SuggestedRemedy

Page 65, line 31 & Page 65, line 32: Change "Sequence" to "sequence".

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.2** *P* **65** *L* **35** # 283

Donahue, Curtis UNH-IOL

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

"24 bit" should be "24-bit".

SuggestedRemedy

Change to "24-bit".

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.4** *P* **66** *L* **28** # 222
McClellan, Brett Marvell

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

following the notation of Clause 48, a sequence ordered set is noted as ||Q||, not |Q|, a Signal ordered set is noted as ||Fsig||, not |Fsig|

SuggestedRemedy

Change |Q| to ||Q|| and |Fsig| to ||Fsig||

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.4** *P* **66** *L* **31** # 284
Donahue, Curtis UNH-IOL

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

"2.5GMII" should be "2.5GPII".

SuggestedRemedy

Change to "2.5GPII".

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.4** *P* **66** *L* **41** # 216
McClellan, Brett Marvell

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

"However any 2.5GPII symbol may be deleted. Usually this will either be a 2.5GPII idle or LPI symbols, though in pathological error conditions (i.e. unterminated packet followed immediately with sequence ordered-set) some other symbol may be deleted."
is there no requirement for a minimum IPG following a frame?
XGMII requires 5 octect IPG

SuggestedRemedy

Consider adding a minimum 5 octect IPG requirement.

Response *Response Status* **C**

REJECT.

We desire not to make this normative because the minimum value would be met by conforming implementations without this explicit requirement.

Cl **127** *SC* **127.2.4.5** *P* **66** *L* **53** # 285
Donahue, Curtis UNH-IOL

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

"24 bit" should be "24-bit".

SuggestedRemedy

Change to "24-bit".

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.5** *P* **67** *L* **12** # 223
McClellan, Brett Marvell

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

in table 127-2 the abbreviation for Normal Interframe is shown as "IDLE", not "Idle" as used in table 127-4 in the 2.5GPII Columns

SuggestedRemedy

Change "Idle" to "IDLE" in the 2.5GPII Columns

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.5** *P* **67** *L* **16** # 224

McClellan, Brett Marvell

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

Should wencode_state be replaced by wdecode_state in the 5th and last columns?
Also need to show that wdecode_state in the last column is the next value of wdecode_state

SuggestedRemedy

change wdecode_state in column 5 to wdecode_state<n>
change wdecode_state in the last column to wdecode_state<n+1>
or
do not change wdecode_state in column 5
change wdecode_state in the last column to wdecode_state_next

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note:

change wdecode_state in column 5 to wdecode_state(n)

change wdecode_state in the last column to wdecode_state(n+1)

() are used for state, <> for vectors]

Cl **127** *SC* **127.2.4.5** *P* **67** *L* **20** # 225

McClellan, Brett Marvell

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

Data* condition is not defined, needs a definition
SOP is not defined for XGMII, it should be "Start"

SuggestedRemedy

Provide definition or note for Data* and change SOP to Start.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

note for Data* and change SOP to Start.

Cl **127** *SC* **127.2.4.5** *P* **67** *L* **30** # 226

McClellan, Brett Marvell

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

transition from DATA to LPI should not be allowed, should pass through ERR first

SuggestedRemedy

line 30 and line 33 change X in 5th column to !DATA

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.4.5** *P* **67** *L* **35** # 227

McClellan, Brett Marvell

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

transition from DATA to Sequence should not be allowed, should pass through ERR first

SuggestedRemedy

line 35 and line 37 change X in 5th column to !DATA

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.5.6** *P* **69** *L* **39** # 286

Donahue, Curtis UNH-IOL

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

"24 bit" should be "24-bit".

SuggestedRemedy

Change to "24-bit".

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.5.6** *P* **69** *L* **40** # 246

Baden, Eric Broadcom Limited

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

Link status (remote fault) signalling indication that are native to XGMII but not GMII should be made optional, and stated as such.

SuggestedRemedy

Change "A sequence ordered_set is used to convey various link status such as local fault or remote fault." to "... convey various optional link status..."

And "The 24 bit data of the sequence ordered_set on the XGMII are mapped to S0, S1, S2, S3 (see 127.2.4.2), and /W0/, /W1/, /W2/, /W3/ are the 8B/10B mapped version." to …ordered_set on the XGMII, when implemented, are mapped to S0, …."

Response *Response Status* **W**

ACCEPT.

Cl **127** *SC* **127.2.5.6** *P* **69** *L* **41** # 228

McClellan, Brett Marvell

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

move "/" after the line break

SuggestedRemedy

page 69 line 41 move "/" after the line break
also page 71 line 5 move '/' after the line break

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.5.7** *P* **10** *L* **4** # 357

Law, David HPE

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

Subclause 127.2.5.7 'Data (/D/)' states that 'A data code-group ... conveys one octet of arbitrary data between the XGMII and the PCS.'. Is this correct since there XGMII is the interface to the PCS, and even within the PCS the interface between the word encode function and the word to octet function is not code-group based, nor is the 2.5GPII between the word to octet function and the transmit function. Instead isn't it the PMA service interface (tx_code-group<9:0> and rx_code-group<9:0>) and PMD service interfaces (tx_bit and rx_bit) that are code-group based. This seems to be further confirmed by the reference to subclause 36.2.4.6 ' Checking the validity of received code-groups'.

SuggestedRemedy

Suggest that the text '... conveys one octet of arbitrary data between the XGMII and the PCS' to read '... conveys one octet of arbitrary data supplied om the XGMII.'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.2** *P* **12** *L* **2** # 358

Law, David HPE

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

Suggest that there should be a reference to the subclause defining /R/.

SuggestedRemedy

Suggest that the text '... either: End_of_Packet delimiter part 2; End_of_Packet delimiter part 3.' should be change to read '... either End_of_Packet delimiter part 2 or End_of_Packet delimiter part 3 as specified in 127.2.5.11.'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.2** *P* **12** *L* **7** # 359

Law, David HPE

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

Suggest that there should be a reference to the subclause defining /T/.

SuggestedRemedy

Suggest that the text '... End_of_Packet delimiter part 1.' Should be change to read '... End_of_Packet delimiter part 1 as specified in 127.2.5.11.'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.2** *P* **72** *L* **18** # 229
McClellan, Brett Marvell

Comment Type **T** *Comment Status* **A**
/PL_LIMIT/ is a number not a set

SuggestedRemedy
change to PL_LIMIT

Response *Response Status* **C**
ACCEPT.

Cl **127** *SC* **127.2.6.1.3** *P* **15** *L* **10** # 360
Law, David HPE

Comment Type **T** *Comment Status* **A**
The definition for the tx_code-group<9:0> variable states that 'This vector is conveyed to the PMA as the parameter of a PMD_UNITDATA.request(tx_bit) service primitive.'. Is this correct, isn't actually conveyed to the PMA as the parameter of the PMA_UNITDATA.request(tx_code-group<9:0>) primitive? See definition of PUDR which is called by Figure 127–6 'PCS transmit code-group state diagram'.

SuggestedRemedy
Suggest that 'This vector is conveyed to the PMA as the parameter of a PMD_UNITDATA.request(tx_bit) service primitive.' be changed to read 'This vector is conveyed to the PMA as the parameter of the PMD_UNITDATA.request(tx_bit) service primitive.'.

Response *Response Status* **C**
ACCEPT.

Cl **127** *SC* **127.2.6.1.3** *P* **72** *L* **37** # 230
McClellan, Brett Marvell

Comment Type **E** *Comment Status* **R**
is the element symbol defined anywhere in 802.3? Does it need definition?

SuggestedRemedy
add a defnition if needed.

Response *Response Status* **C**
REJECT.

Definition not required.

Cl **127** *SC* **127.2.6.1.3** *P* **74** *L* **14** # 136
Smith, Daniel Seagate

Comment Type **ER** *Comment Status* **A**
capitalization in name

SuggestedRemedy
should read: PMD_SIGNAL.indication(SIGNAL_DETECT).

Response *Response Status* **C**
ACCEPT.

Cl **127** *SC* **127.2.6.1.3** *P* **74** *L* **19** # 335
Law, David HPE

Comment Type **T** *Comment Status* **A**
The definition for the sync_status states that it is 'A parameter set by the PCS Synchronization process ...'. The term parameter is normally used for information conveyed in a primitive related to a service interface, for example see subclause 127.3.1.1.1 'Semantics of the service primitive'. I don't think this is the case for sync_status. Further I don't see sync_status generated by the PCS Synchronization process, instead it is derived from code_sync_status (which is generated by the PCS Synchronization process) and rx_lpi_active varibles.

SuggestedRemedy
Suggest that the text 'A parameter set by the PCS Synchronization process to reflect the status of the link as viewed by the receiver. The values of the parameter are defined for code_sync_status. The equation for this parameter is' be replaced with 'Alias used by the PCS receive state diagram, consisting of the following terms:'.

Response *Response Status* **C**
ACCEPT.

Cl **127** *SC* **127.2.6.1.3** *P* **74** *L* **19** # 336
Law, David HPE

Comment Type **T** *Comment Status* **A**
Since tx_even is generated by Figure 127–6 'PCS transmit code-group state diagram', part of the TRANSMIT function in Figure 127-2, and is used by Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram', the WORD-TO-OCTET function in Figure 127-2, tx_even seesms to cross the 2.5GPII and therefore appears to be part of the interface.

SuggestedRemedy
Add sync_status to Figure 127-2.

Response *Response Status* **C**
ACCEPT.
[Editor's note: comment bubble added in the draft where to do this.]

Cl **127** *SC* **127.2.6.1.3** *P* **74** *L* **24** # 337

Law, David HPE

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

Subclause 127.2.6.1.3 'Variables' states that 'The equation for this parameter is sync_status = code_sync_status + rx_lpi_active.' While rx_lpi_active is a Boolean (see page 76, line 18), code_sync_status is not, instead the values for the code_sync_status parameter are 'FAIL' and 'OK' (see page 76, line 10). Further it is stated that The values of the parameter are defined for code_sync_status.'.

As a result the above the output of this equation is defined as parameter with the value of either 'FAIL' or 'OK' based on a OR of a Boolean and a parameter with the value of either 'FAIL' or 'OK'. It however isn't clearly defined how the parameter values 'FAIL' and 'OK' should be mapped to Boolean values for input to, and output from, the OR operation.

SuggestedRemedy

Suggest that text 'Where the parameter value 'OK' maps to the Boolean value 'TRUE' and 'FAIL' maps to the Boolean value 'FALSE'.' be added after the equation.

Response *Response Status* **C**

ACCEPT.
[Editor's note: added 'the parameter value' before FAIL:

"Where the parameter value 'OK' maps to the Boolean value 'TRUE' and the parameter value 'FAIL' maps to the Boolean value 'FALSE'."]

Cl **127** *SC* **127.2.6.1.3** *P* **74** *L* **34** # 338

Law, David HPE

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

Figure 127–2 'Functional block diagram' shows the input to the 'WORD-TO-OCTETS' as tpd<3:0><7:0>, tp_en<3:0> and tp_er<3:0>, and the output as tpd<7:0>, tp_en, tp_er. Similarly Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram' shows assignments such as tp_en <= tp_en<0>, tp_er <= tp_er<0> and tpd<7:0> <= tpd<0><7:0>.

It is confusing to use the same variable names as both the input and output of the 'WORD-TO-OCTETS' function with the only differentiation being that the input is an array, for example tp_en<3:0>, and the output is a bit, for example tp_en. This also looks odd within the stats diagram as you end up with assignments such as tp_en <= tp_en<0>. In particular this is because in other instances the name of the array is used to mean the entire array. As an example tx_code-group<9:0> is defined on page 75, line 7, yet in the state SPECIAL_GO (page 83, 10) there is the assignment tx_code-group <= tx_o_set without reference to the array width.

In addition the definition for tpd<x><7:0> states that 'x= 0, 1, 2, 3 for the four sets of 2.5GPII.'. That doesn't seem to match the use of tpd as an input to the 'WORD-TO-OCTETS' function in Figure 127–2, nor to the definition of the WENCODE function (page 78, line 6), where x has the value '3:0'.

I'm also not sure the definition for the input variables to the 'WORD-TO-OCTETS' function are correct. Take as an example tp_en<x> (page 74, line 38). The definition states '2.5GPII transmit data valid to the Word-to-Octets process. x= 0, 1, 2, 3 for the four sets of 2.5GPII.'

According to Figure 127–2 'Functional block diagram' the 2.5GPII is between the 'WORD-TO-OCTETS' block and the PMA. This isn't where this variable is used, instead it is used between the 'WORD ENCODE' block and the 'WORD-TO-OCTETS' block, and therefore this isn't '2.5GPII transmit data valid', it's the input to the Word-to-Octets process that 2.5GPII transmit data valid is derived from.

SuggestedRemedy

Suggest that since the connection between the 'WORD ENCODE' block and the 'WORD-TO-OCTETS' isn't defined as an interface, and is instead internal to the PCS Word Encode and Word-to-Octets state diagram, that:

[1] tp_en<3:0> be changed to be we_tp_en<3:0>
[2] tp_er<3:0> be changed to be we_tp_er<3:0>
[3] tpd<3:0><7:0> be changed to we_tpd<31:0>

[4] The assignments in state TX_XGMII be changed to:

{we_tp_en<3:0>,we_tp_er<3:0>,we_tpd<31:0>,wencode_state} <= WENCODE(TXC<3:0>,TXD<31:0>,wencode_state)

[5] The assignments in state TX_2.5GPII_0 be changed to:

tp_en <= we_tp_en<0>
tp_er <= we_tp_er<0>
tpd<7:0> <= we_tpd<7:0>

[6] The assignments in state TX_2.5GPII_1 be changed to:

tp_en <= we_tp_en<1>
tp_er <= we_tp_er<1>
tpd<7:0> <= we_tpd<15:8>

[7] The assignments in state TX_2.5GPII_2 be changed to:

tp_en <= we_tp_en<2>
tp_er <= we_tp_er<2>
tpd<7:0> <= we_tpd<23:16>

[8] The assignments in state TX_2.5GPII_3 be changed to:

tp_en <= we_tp_en<3>
tp_er <= we_tp_er<3>
tpd<7:0> <= we_tpd<31:24>

[9] The definition for tpd<x><7:0> be changed to read:

we_tpd<31:0>
Transmit data output of the WORD ENCODE process.

[10] The definition of tp_en<x> be changed to read:

tp_en<3:0>
Transmit data valid output of the WORD ENCODE process.

[11] The definition of tp_er<x> be changed to read:

tp_er<3:0>
Transmit error output of the WORD ENCODE process.

[12] Figure 127–2 'Functional block diagram be updated as follows:

tpd<3:0><7:0> be changed to we_tpd<31:0>
tp_en<3:0> be changed to be we_tp_en<3:0>
tp_er<3:0> be changed to be we_tp_er<3:0>

[13] 127.2.4.3 'Word-to-Octets' is changed to read:

The Word-to-Octets process takes the output of the Word Encoder (we_tp_en<3:0>, we_tp_er<3:0>, we_tpd<31:0>) and presents it one symbol at a time (tp_en, tp_er, tpd<7:0>) to the PCS transmit process. we_tpd<7:0> is presented first and we_tpd<31:24> is presented last.

The Word-to-Octets process shall be synchronized to the PCS transmit process such that we_tpd<7:0> and we_tpd<23:16> are presented to the PCS transmit process which will result in the corresponding ordered set to be output to the PMA when the variable tx_even is TRUE and we_tpd<15:8> and we_tpd<31:24> when the variable tx_even is FALSE.

[14] A similar set of changes should be made to the receive path.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept as is and also fix the receive path.

Suggest that since the connection between the 'WORD ENCODE' block and the 'WORD-TO-OCTETS' isn't defined as an interface, and is instead internal to the Figure 127-4 PCS Word Encode and Word-to-Octets state diagram, that:

[1] tp_en<3:0> be changed to be we_tp_en<3:0>
[Editor's note: done]

[2] tp_er<3:0> be changed to be we_tp_er<3:0>
[Editor's note: done]

[3] tpd<3:0><7:0> be changed to we_tpd<31:0>
[Editor's note: done]

[4] The assignments in state TX_XGMII be changed to:

{we_tp_en<3:0>,we_tp_er<3:0>,we_tpd<31:0>,wencode_state} <=
WENCODE(TXC<3:0>,TXD<31:0>,wencode_state)
[Editor's note: done]

[5] The assignments in state TX_2.5GPII_0 be changed to:

tp_en <= we_tp_en<0>
tp_er <= we_tp_er<0>
tpd<7:0> <= we_tpd<7:0>
[Editor's note: done]

[6] The assignments in state TX_2.5GPII_1 be changed to:

tp_en <= we_tp_en<1>
tp_er <= we_tp_er<1>
tpd<7:0> <= we_tpd<15:8>
[Editor's note: done]

[7] The assignments in state TX_2.5GPII_2 be changed to:

tp_en <= we_tp_en<2>
tp_er <= we_tp_er<2>
tpd<7:0> <= we_tpd<23:16>
[Editor's note: done]

[8] The assignments in state TX_2.5GPII_3 be changed to:

tp_en <= we_tp_en<3>
tp_er <= we_tp_er<3>
tpd<7:0> <= we_tpd<31:24>
[Editor's note: done]

[9] The definition for tpd<x><7:0> be changed to read:

we_tpd<31:0>
Transmit data output of the WORD ENCODE process.

[10] The definition of tp_en<x> be changed to read:

tp_en<3:0>
Transmit data valid output of the WORD ENCODE process.

[11] The definition of tp_er<x> be changed to read:

tp_er<3:0>
Transmit error output of the WORD ENCODE process.

[12] Figure 127–2 'Functional block diagram be updated as follows:

tpd<3:0><7:0> be changed to we_tpd<31:0>
tp_en<3:0> be changed to be we_tp_en<3:0>
tp_er<3:0> be changed to be we_tp_er<3:0>

[13] 127.2.4.3 'Word-to-Octets' is changed to read:

The Word-to-Octets process takes the output of the Word Encoder (we_tp_en<3:0>, we_tp_er<3:0>, we_tpd<31:0>) and presents it one symbol at a time (tp_en, tp_er, tpd<7:0>) to the PCS transmit process. We_tpd<7:0> is presented first and we_tpd<31:24> is presented last.

The Word-to-Octets process shall be synchronized to the PCS transmit process such that we_tpd<7:0> and we_tpd<23:16> are presented to the PCS transmit process which will result in the corresponding ordered set to be output to the PMA when the variable tx_even is TRUE and we_tpd<15:8> and we_tpd<31:24> when the variable tx_even is FALSE.

[14] A similar set of changes should be made to the receive path.

Cl **127** *SC* **127.2.6.1.3** *P* **75** *L* **16** # 339

Law, David HPE

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

I believe that running disparity is described in subclause 36.2.4.4 'Running disparity rules' of IEEE Std 802.3-2015, not subclause 36.2.4.3 which I believe is 'Valid and invalid code-groups.'.

SuggestedRemedy

Suggest that 'Running disparity is described in 36.2.4.3.' be changed to read 'Running disparity is described in 36.2.4.4.'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.3** *P* **76** *L* **15** # 231

McClellan, Brett Marvell

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

idle_d definition uses akward language

SuggestedRemedy

change
"SUDI(![/D21.5/] * ![/D2.2/])
that uses an alternate form to support the EEE capability:
SUDI(![/D21.5/] * ![/D2.2/] * ![/D6.5/] * ![/D26.4/])"
to
"SUDI(![/D21.5/] * ![/D2.2/]) when EEE is not supported or
SUDI(![/D21.5/] * ![/D2.2/] * ![/D6.5/] * ![/D26.4/]) when EEE is supported"

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.4** *P* **17** *L* **4** # 361

Law, David HPE

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

The last sentence of the definition of the ENCODE function states that 'ENCODE also updates the current running disparity as per Table 36-1a–e.'. I believe it is IEEE Std 802.3-2015 subclause 36.2.4.4 'Running disparity rules' that defines how running disparity is calculated, as that subclause is referenced in the definition of tx_disparity variable which states 'Running disparity is described in 36.2.4.3.'. In addition I believe it is the ENCODE function that sets the value of the tx_disparity variable that is tested in the IDLE_DISPARITY_TEST state in Figure 127–6 'PCS transmit code-group state diagram'.

SuggestedRemedy

Suggest that the text 'ENCODE also updates the current running disparity as per Table 36-1a–e.'. be changed to read 'ENCODE also updates the current running disparity variable tx_disparity per the running disparity rules outlined in 36.2.4.4.'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.4** *P* **77** *L* **6** # 232

McClellan, Brett Marvell

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

"NEXTSEQ()" is a function with no input. Why is "()" included?
This function appears similar to the check_end function. Perhaps the name format should be similar.

SuggestedRemedy

Change "NEXTSEQ()" to "check_SEQ"
similarly change "WALIGN()" to "WALIGN"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

NEXTSEQ: reject the name change

WALIGN: remove parentheses globally (also in figures)
(as in comment #287)

Cl **127** *SC* **127.2.6.1.4** *P* **77** *L* **18** # 233

McClellan, Brett Marvell

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

"Signal_detectCHANGE" is not capitalized.

SuggestedRemedy

change "Signal_detectCHANGE" to "signal_detectCHANGE"

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.4** *P* **77** *L* **45** # 287

Donahue, Curtis UNH-IOL

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

This paragraph uses "X" to indicate a number of 2.5GPII symbols, however the title is just "WALIGN()" (no input variable X). I'm not an expert in Function definitions but I think it should be "WALIGN(X)". Also, other functions use lowercase "x" or "y", probably should be the same here.

SuggestedRemedy

Change "WALIGN()" to "WALIGN(x)". Change instances of "X" to "x".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

There is no parameter when WALIGN is called, so we'll remove the parentheses.

Cl **127** *SC* **127.2.6.1.6** *P* **78** *L* **47** # 137

Smith, Daniel Seagate

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

capitalization in name

SuggestedRemedy

should read: PMD_SIGNAL.indication(SIGNAL_DETECT).

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.7** *P* **19** *L* **31** # 362

Law, David HPE

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

According to the XGMII TX_CLK specification and Figure 46–16 'TX_CLK and RX_CLK timing parameters' the XGMII TXC and TXD signals are only valid for 480ps before and after the rising and falling edge of TX_CLK, and the minimum pulse width for TX_CLK is 2.5ns. As far as I can see these specifications are not changed by IEEE Std 802.3bz-2016 when 2.5 Gb/s and 5 Gb/s operation is added to the XGMII and therefore a TX_CLK clock duty cycle as low as 9.7% seems to be permitted for 2.5Gb/s operation.

This seems to present a problem for Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram' as it will take four cg_timer_done, which is 12.8ns, between samples of TXC<3:0> and TXD<31:0> in the TX_XGMII state, please see figure IEEE_P802d3cb_D2p0_David_Law_clock.pdf attached to this comment.

SuggestedRemedy

Latching of TXC<3:0> and TXD<31:0> has to occur both on the rising and falling edge of TX_CLK.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Resolution, see file
kim_3cb_01_1116.pdf

Cl **127** *SC* **127.2.6.1.7** *P* **79** *L* **42** # 340

Law, David HPE

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

Subclause 46.3.1.1 'TX_CLK (transmit clock)' of IEEE Std 802.3-2015, as modified by IEEE P802.3bz/D3.3, states that 'TX_CLK provides the timing reference for the transfer of the TXC<3:0> and TXD<31:0> signals from the RS to the PHY. The values of TXC<3:0> and TXD<31:0> shall be sampled by the PHY on both the rising edge and falling edge of TX_CLK.'.

Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram' uses cg_timer_done to exit the RESET state in to the TX_XGMII state, where TXC<3:0> and TXD<31:0> are sampled by the WENCODE function. From that point on a further four occurrences of cg_timer_done cause entry in to the TX_XGMII state, and for TXC<3:0> and TXD<31:0> to be sampled again by the WENCODE function. Based this doesn't the cg_timer timer have to be phase locked to TX_CLK. If not drift between cg_timer and TX_CLK could result in loss or duplication of data.

SuggestedRemedy

Suggest that the text 'The cg_timer shall expire synchronously with both the rising edge and falling edge of TX_CLK (see tolerance required for TX_CLK in 46.3.1.1) on entry to the TX_XGMII state in the PCS Word Encode and Word-to-Octets state diagram (see Figure 127-4).' be added to the definition of the cg_timer timer.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add the text below to the end of the definition of cg_timer.

If XGMII is implemented, cg_timer shall expire synchronously with the rising and falling edges of TX_CLK (see tolerance required for TX_CLK in 46.3.1.1). In the absence of XGMII, cg_timer
shall expire every 3.2 ns ± 100ppm.

Cl **127** *SC* **127.2.6.2.1** *P* **80** *L* **25** # 341

Law, David HPE

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

Subclause 127.2.2 'Functions within the PCS', and its subclauses 127.2.4.2 'Word Encode' 127.2.4.3 'Word-to-Octets', give a reasonably detailed description of the operation of these functions, and therefore, the associated state diagrams. Subclause 127.2.6 'Detailed functions and state diagrams', despite its title, however in subclause 127.2.6.2.1 'Word Encode and Word-to-Octets' gives only a higher level description.

SuggestedRemedy

Suggest that instead of duplicating at a high level, a cross reference be provided to the earlier detailed text, and that subclause 127.2.6.2.1 'Word Encode and Word-to-Octets' be changed to read:

The Word Encode function (see 127.2.4.3) and Word-to-Octets function (see 127.2.4.3) are described in the state diagram depicted in Figure 127–4, including compliance with the associated state variables as specified in 127.2.6.1.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add the following cross references in 127.2.6.2.1:

Word Encode function (see 127.2.4.3)
Word-to-Octets function (see 127.2.4.3)

Cl **127** *SC* **127.2.6.2.1** *P* **81** *L* **11** # 342

Law, David HPE

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

Since tx_even is generated by Figure 127–6 'PCS transmit code-group state diagram', part of the TRANSMIT function in Figure 127-2, and is used by Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram', the WORD-TO-OCTET function in Figure 127-2, tx_even cross the 2.5GPII and therfore appears to be part of the interface.

SuggestedRemedy

Add tx_even to Figure 127-2.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Same as comment #336.

Cl **127** *SC* **127.2.6.2.1** *P* **81** *L* **43** # 343

Law, David HPE

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

In Figure 127–4 'PCS Word Encode and Word-to-Octets state diagram' suggest that 'tx_even_FALSE' should read 'tx_even=FALSE' on the exit from state TX_2.5GPII_3.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.2** *P* **81** *L* **2** # 374

Law, David HPE

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

Remove spurious logical OR at end of equation leading to entry to RESET state in Figure 127-4.

SuggestedRemedy

Change '... mr_main_reset=TRUE +' to read '... mr_main_reset=TRUE'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.2** *P* **82** *L* **4** # 345

Law, David HPE

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

In Figure 127–5 'PCS transmit ordered set state diagram' suggest that 'tx_en=1 * tx_er=1' should read 'tp_en=1 * tp_er=1' on the transition from the state XMIT_DATA to ALIGN_ERR_START.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.2** *P* **83** *L* **26** # 346

Law, David HPE

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

The 'else' in the states should be uppercase, see the last entry in IEEE Std 802.3-2015 Table 21–1. Suggest that the 'If' and 'then' should also be UPPERCASE. See IEEE Std 802.3-215 Figure 48–7 for example of this formatting.

Suggest similar formatting for state diagram function definition pseudo code that uses the same construct on page 77, line 28.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **22** *L* **8** # 363

Law, David HPE

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

In Figure 127–5 'PCS transmit ordered set state diagram', on the transition from XMIT_DATA to XMIT_SEQUENCE suggest that "TX_OSETindicate" should read "TX_OSET.indicate".

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **22** *L* **10** # 364

Law, David HPE

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

The exit condition from the XMIT_DATA state to the XMIT_SEQUENCE state in Figure 127–5 'PCS transmit ordered set state diagram' is 'assert_seq * TX_OSET.indicate', to the XMIT_LPIDLE state is 'assert_lpidle * TX_OSET.indicate' and to return to the XMIT_DATA state is 'tp_en=0 * TX_OSET.indicate'.

Since 'assert_seq = tp_en=0 * tp_er=1 * (tpd<7:0>=0x9C)', when the condition 'assert_seq * TX_OSETindicate' becomes true the condition 'tp_en=0 * TX_OSET.indicate' will also become true, meaning that the transition to both XMIT_SEQUENCE and XMIT_DATA are valid which isn't correct.

Similarly since 'assert_lpidle = tp_en=0 * tp_er=1 * (tpd<7:0>=0x01)', when the condition 'assert_lpidle * TX_OSET.indicate' becomes true the condition 'tp_en=0 * TX_OSET.indicate' will also become true, meaning that the transition to both XMIT_LPIDLE and XMIT_DATA are valid which isn't correct.

SuggestedRemedy

Suggest that the condition 'tp_en=0 * TX_OSET.indicate' be changed to read '!assert_lpidle * !assert_seq * tp_en=0 * TX_OSET.indicate'.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **22** *L* **43** # 365

Law, David HPE

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

Two different fonts are being used in Figure 127–5 'PCS transmit ordered set state diagram'. This can be most clearly seen in the transition from XMIT_DATA to START_OF_PACKET where the condition is "tp_en=1 * tp_er=0 * TX_OSET.indicate". There are two different fonts are used for the "=" symbol. Another example is the transition from CARRIER_EXTEND to START_ERROR where the condition is "tp_en=1 * tp_er=1 * TX_OSET.indicate". In this case there are two different fonts used for the '1'.

SuggestedRemedy

Please use one font consistently.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **22** *L* **51** # 366

Law, David HPE

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

In Figure 127–5 'PCS transmit ordered set state diagram', on the transition from the state XMIT_SEQ_DATA to XMIT_DATA, suggest that 'TX_OSET.indicte' should read 'TX_OSET.indicate'.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **23** *L* **9** # 367

Law, David HPE

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

The SPECIAL_GO state in Figure 127-6 has the assignment 'tx_code-group <= tx_o_set'. tx_code-group is defined as a 10 bit code-group, tx_o_set however is defined as an ordered set. It would seem that when tx_o_set is /V/, /S/, /T/ or /R/ it needs to be encoded in to a code-group as defined in rows 6 to 9 of Table 127-5 'Defined ordered sets'.

SuggestedRemedy

Suggest that in the SPECIAL_GO state, line ' tx_code-group <= tx_o_set' is replaced with:

IF tx_o_set= /R/ THEN (tx_code-group <= /K23.7/) ELSE
IF tx_o_set= /S/ THEN (tx_code-group <= /K27.7/) ELSE
IF tx_o_set= /T/ THEN (tx_code-group <= /K29.7/) ELSE
IF tx_o_set= /V/ THEN (tx_code-group <= /K30.7/) ELSE
tx_code-group <= tx_o_set

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **23** *L* **26** # 368

Law, David HPE

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

In Figure 127–6 'PCS transmit code-group state diagram' in the state IDLE_I1B suggest that 'tx_oset' should read 'tx_o_set'.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **23** *L* **40** # 369

Law, David HPE

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

In Figure 127–6 'PCS transmit code-group state diagram' in the state IDLE_I2B suggest that 'tx_oset' should read 'tx_o_set'.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **24** *L* **14** # 370

Law, David HPE

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

In the transition from the ACQUIRE_SYNC_1 back to itself in Figure 127-7 the condition is PUDI(![/COMMA/] * 'nonmembership symbol' [/INVALID/]). I'm not sure I understand why the 'nonmembership symbol' is used in the case of /INVALID/ when it isn't in the case of /COMMA/. Both /INVALID/ and /COMMA/ are sets (see subclause 127.2.6.1.2 Constants) therefore I read '![/COMMA/]' to mean nonmembership of the set of special code-groups which include a comma, just as the second term means nonmembership of the set of invalid data or special code-groups.

SuggestedRemedy

If both terms mean nonmembership of the set suggest a consistent notation be used here, and elsewhere.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.3** *P* **82** *L* **9** # 3

Laubach, Mark Broadcom Limited

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

Line 9: the "D" goto box is colliding with the text below it. Provide more separation.

Line 10: There is a dashed box colliding with the text "assert_lpidle * TX_OSET.indicate". Can you fix so that the lines do not overwrite the text? Also, should be consistent with the "D" transition next to it, both have dashed boxes or both do not.

Line 53: "NOTE—Transitions B and C are only required for the EEE capability." is colliding with the figure caption. Need more visual separation.

Line 5: align bottom of arrows, move right most arrow a little more right.

Line 15: arrow is entering state box, should just be touching.

Line 42: why is there a dashed box around the "B" entry state machine, but not a similar box around the "D" entry state machine? Make box use consistent.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

We accept all but with the following additions:

Line 10: The "D" transition is mandatory, so it should noit Have a dashed box around it.

Line 42 comment is best resolved with a change to the footnote:
NOTE— A transition inside a dashed box is only required for the EEE capability.

Cl **127** *SC* **127.2.6.2.3** *P* **85** *L* **2** # 135

Smith, Daniel Seagate

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

effecting hysteresis

SuggestedRemedy

s/b: affecting hysteresis (affect is a verb)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

After examination, we decided to remove the statement about hystersis. It should read:

… sub-states, to move between the
SYNC_ACQUIRED_1 and LOSS_OF_SYNC states.

Cl **127** *SC* **127.2.6.2.3** *P* **85** *L* **5** # 347

Law, David HPE

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

It is states that 'For EEE capability the relationship between sync_status and code_sync_status is given by Figure 127–8c;
otherwise sync_status is identical to code_sync_status.'. I don't see the relationship between sync_status and code_sync_status given in Figure 127–8c, in fact I don't see sync_status used in Figure 127–8c, only code_sync_status is used.

SuggestedRemedy

Suggest that 'For EEE capability the relationship between sync_status and code_sync_status is given by Figure 127–8c; otherwise sync_status is identical to code_sync_status.' be changed to read 'For EEE capability the relationship between sync_status and code_sync_status is given by the definition of the sync_status variable in 127.2.6.1.3; otherwise sync_status is identical to code_sync_status.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **86** *L* **5** # 348

Law, David HPE

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

In Figure 127–8a 'PCS receive state diagram, part a' suggest that 'rx lpi active <= FALSE;' should read 'rx_lpi_active <= FALSE' in the LINK_FAILED state.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **86** *L* **5** # 349

Law, David HPE

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

In Figure 127–8a 'PCS receive state diagram, part a' suggest that in the state 'LINK_FAILED' the spurious ';' at the end of the first two assignments, and the spurious '.' at the end of the third, be deleted.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **86** *L* **11** # 350

Law, David HPE

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

In Figure 127–8a 'PCS receive state diagram, part a' suggest that in the state 'WAIT_FOR_K' the spurious ';' at the end of the first assignments and the spurious '.' at the end of the second, be deleted.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **86** *L* **19** # 351

Law, David HPE

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

In Figure 127–8a 'PCS receive state diagram, part a' suggest that 'rp-dv <= 0;' should read 'rp_dv <= 0' in the RX_K state.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **86** *L* **29** # 352

Law, David HPE

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

In Figure 127–8a 'PCS receive state diagram, part a' suggest that 'rp-dv <= 0;' should read 'rp_dv <= 0' in the IDLE_D state.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **86** *L* **47** # 353

Law, David HPE

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

In Figure 127–8a 'PCS receive state diagram, part a' suggest that a note similar to NOTE 2 found on Figure 127–8b 'PCS receive state diagram, part b' be added for the edit from the CARRIER_DETECT states.

SuggestedRemedy

Suggest that 'NOTE 2 - The transitions from the CARRIER_DETECT state is a test against the codegroup obtained from the SUDI that caused the transition to CARRIER_DETECT state.' be added to Figure 127–8a 'PCS receive state diagram, part a'. The existing note will need to be designated NOTE 1.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **87** *L* **44** # 4

Laubach, Mark Broadcom Limited

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

Un-needed arrow head, remove.
For consideration: some of the state boxes look like unaligned separate lines, rather than a graphic box. Suggestion: make the corners look better aligned regardless of how drawn. Note this could be a FM -> PDF issue.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.2.4** *P* **88** *L* **7** # 5

Laubach, Mark Broadcom Limited

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

Many of the line "corners" are not graphically aligned in this figure that should be aligned better. Also, seeing lines running into state boxes that should be "move behind" or similar to neaten things up.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.3.4** *P* **94** *L* **18** # 171

Hidaka, Yasuo Fujitsu Lab of America

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

"Random jitter test patterns" are not specified in Annex 127A or Annex 36A which is referred from Annex 127A, although Annex 36A specifies "Jitter test patterns".

SuggestedRemedy

Change "Random jitter test patters" with "Jitter test patterns".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #253. We agree the word "Random" should not be there. The sentence is superceded by changes in comment 253,

Cl **127** *SC* **127.6** *P* **94** *L* **43** # 172

Hidaka, Yasuo Fujitsu Lab of America

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

Clause 71.8 is interconnect characteristics. Clause 71.9 is environment specifications.

SuggestedRemedy

Change the reference to 71.8 with a reference to 71.9.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.7** *P* **95** *L* **39** # 59

Anslow, Pete Ciena

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

The publication date for P802.3cb is unknown.

SuggestedRemedy

Change "2016" to "201x" in two places each in 127.7.3.2, 128.10.2.2, 129.7.2.2, 128A.4.2.2, 128B.4.2.2, 128D.3.2.2, 130A.4.2.2, 130B.4.2.2.
This should be done by changing the variable "PICS_year" in each file in the book.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.7.4** *P* **96** *L* **12** # 247

Baden, Eric Broadcom Limited

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

If my comment on 127.2.5.6 on link status signalling to be made optional is accepted, PICS entry needs to be added

SuggestedRemedy

Add a line for LNKS; Implementation of PCS Link Status Signalling; Subclause 127.2.5.6; O; Yes [ ] No []

Proposed Response *Response Status* **W**

[Editor's note: this comment (#247) is dependent on acceptance of #246.]

Cl **127** *SC* **127.7.5.4** *P* **97** *L* **48** # 354

Law, David HPE

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

In item PMA1 suggest that '… of tx_code_group' should read '… of tx_code-group' .

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Cl **127A** *SC* **127A** *P* **157** *L* **6** # 253

Healey, Adam Broadcom Ltd.

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

The only 2.5GBASE-X PMD is the one defined by Clause 128 and that clause explicitly defines the test pattern to be used for each parameter. Further, Clause 128 does not appear to cite and Annex 36A test patterns. Therefore, this annex seems to have no purpose.

SuggestedRemedy

Remove the Annex.

Response *Response Status* **C**

ACCEPT.

Cl **127A** SC **127A** P **157** L **6** # 116
D'Ambrosia, John Futurewei, Subsidiary

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

Annex127A consists of two sentences with a pointer to Annex36A. This does not help with ease of reading for the reader.

SuggestedRemedy

Delete Annex127A. Replace the last sentnece in second paragraph of 127.3.4. with - The patterns described in Annex 36A may be used
for 2.5GBASE-X except the nominal bit rate is 2.5 times faster and any references to the GMII applies to the XGMII."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
Delete Annex 127A

Replace sentence on page 94, line 18:
"Random jitter test patterns for 2.5GBASE-X are specified in Annex 127A."

With:
"The patterns described in Annex 36A may be used for 2.5GBASE-X except the nominal bit rate is 2.5 times faster and any references to the GMII applies to the XGMII."

Then remove Annex 127A.

Cl **127B** SC P **158** L **38** # 111
Larry, McMillan Western Digital

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

Typo: "1000BASEX PCS will interpret each /Q/ ordered_set as four /I/ ordered set." "set" should be plural not singular

SuggestedRemedy

Change to read: "1000BASEX PCS will interpret each /Q/ ordered_set as four /I/ ordered sets." i.e. change "set" to "sets"

Response *Response Status* **C**

ACCEPT.

Cl **127B** SC P **158** L **43** # 112
Larry, McMillan Western Digital

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

in the phrase "can detect false carrier, but these will be converted to receive error", "carrier" and "error" should be plural, not singular

SuggestedRemedy

Change to read: "can detect false carriers, but these will be converted to receive errors". i.e. change "carrier" to "carriers" and "error" to "errors"

Response *Response Status* **C**

ACCEPT.

Cl **127B** SC P **158** L **45** # 113
Larry, McMillan Western Digital

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

"It is permissible for a compliant 1000BASE-X PCS transmit process to truncated the first byte of preamble" is grammatically incorrect

SuggestedRemedy

Change to read: "It is permissible for a compliant 1000BASE-X PCS transmit process to truncate the first byte of a preamble" i.e. change "truncated" to "truncate" and add an "a" before "preamble"

Response *Response Status* **C**

ACCEPT.

Cl **127B** SC P **158** L **46** # 288
Donahue, Curtis UNH-IOL

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

"2.5Gb/s"

SuggestedRemedy

Change to "2.5 Gb/s"

Two instances:

Page 158, Line 46
Page 158, Line 49
Page 159, Line 6

Response *Response Status* **C**

ACCEPT.

Cl **127B** *SC* **127B** *P* **158** *L* **6** # 254
Healey, Adam Broadcom Ltd.

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

A 1000BASE-X PCS/PMA operating at 2.5 times its specified signaling rate is beyond the scope of IEEE Std 802.3. As a result, it is unclear why the standard should address compatibility with this non-standard application.

SuggestedRemedy

Remove the Annex.

Response *Response Status* **C**

REJECT.

This is informative and serves the installed base of 2.5G SGMII based ports operating with 802.3 standard compliant ports.

Cl **127B** *SC* **127B** *P* **158** *L* **30** # 20
Hajduczenia, Marek Charter Communicatio

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

The use of keywords such us "will" is clearly delineated in the Style Manual, see 10.2.2 Shall, should, may, and can

SuggestedRemedy

Please review the use of keywords such as MUST WILL and CAN in the draft and replace all of them with statements in Present Simple tense apart from usages where Style Manual is followed clearly.
In this particualr location, change "at the end of packet will be correctly converted as idles" to "at the end of packet are correctly converted as idles"

Response *Response Status* **C**

REJECT.

802.3-2015 uses the word "will" that conflicts with the style guide. Not enough information given to consider specific use of "will".

Cl **128** *SC* **7.1.6** *P* **109** *L* **41** # 1
McDermott, Thomas Fujitsu

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

The cluase deals with common mode output return loss, but references differential output retun loss in line 41, and the titel of figure 128-5 on page 110.

SuggestedRemedy

On page 109 line 41 - change 'differential mode' to 'common mode'.
Page 110 line 23 - change 'differenital mode' to 'common mode' in the figure title.

Response *Response Status* **W**

ACCEPT.

Cl **128** *SC* **128.1** *P* **99** *L* **9** # 248
Healey, Adam Broadcom Ltd.

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

Clause 45 is not an external cross-reference since it is amended in this draft.

SuggestedRemedy

Make this a live cross-reference to Clause 45 and change the font color to black.

Response *Response Status* **C**

ACCEPT.
[Editor's note: this will show as green until the change markings are removed. Then it will be black.]

Cl **128** *SC* **128.2** *P* **99** *L* **43** # 289
Donahue, Curtis UNH-IOL

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

There seems to be an inconsistantcy between "2.5GBASE-X PMD" and "2.5GBASE-KX PMD", previously in the draft I only saw "2.5GBASE-KX PMD". Should be consistant throughout the draft.

SuggestedRemedy

Change all instances of "2.5GBASE-X PMD" to "2.5GBASE-KX PMD". I see "2.5GBASE-X PMD" in the following places.

Page 99, Line 43
Page 100, Line 24
Page 157, Line 8

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.2** *P* **99** *L* **46** # 290

Donahue, Curtis UNH-IOL

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

"64B/66B". Shouldn't this be "8B/10B" for BASE-X?

SuggestedRemedy

Change to "8B/10B".

Response *Response Status* **C**

ACCEPT.
[Editors note: same as #114]

Cl **128** *SC* **128.2** *P* **99** *L* **46** # 114

Bains, Amrik Cisco Systems

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

2.5GBASE-X uses 8B/10B 10 bit interface between PMA/PMD and not
"The PMD Service Interface supports the exchange of encoded and scrambled 64B/66B blocks between the
PMA and PMD entities."

SuggestedRemedy

The PMD Service Interface supports the exchange of encoded 8B/10B blocks between the PMA and PMD entities.

Response *Response Status* **W**

ACCEPT.

Cl **128** *SC* **128.2.4.3** *P* **101** *L* **42** # 291

Donahue, Curtis UNH-IOL

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

"1000BASE-KX PHY". Should be "2.5GBASE-KX PHY".

SuggestedRemedy

Change to "2.5GBASE-KX PHY".

Response *Response Status* **C**

ACCEPT.
[Editor's note: same as #115]

Cl **128** *SC* **128.3** *P* **102** *L* **20** # 173

Hidaka, Yasuo Fujitsu Lab of America

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

Table 125-2 in clause 125.1.4, page 57 specifies clause 73 AN is optional for 2.5GBASE-KX, but here it is written as the PCS shall support the AN.

SuggestedRemedy

Change "shall support" with "optionally support", or change clause 73 AN in Table 125-2 from "O" to "M".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "shall support" with "may optionally support".

Cl **128** *SC* **128.6.10** *P* **105** *L* **26** # 292

Donahue, Curtis UNH-IOL

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

"Auto-negotiation". Should be "Auto-Negotiation" (capital "N").

SuggestedRemedy

Change to "Auto-Negotiation".

Response *Response Status* **C**

ACCEPT.

[Editor action: do global search of document and make the same change.]

Cl **128** *SC* **128.7.1** *P* **106** *L* **28** # 175

Hidaka, Yasuo Fujitsu Lab of America

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

"Duty Cycle Distortion (DCD)" is not an adequate term to represent a type of jitter, because it is not clear whether the DCD is on the signal itself or on the clock that genarets the signal. Use of this term is now discouraged. We should call it Even-Odd Jitter that is defined in 92.8.3.8.1.

SuggestedRemedy

Change "Duty Cycle Distortion" with "Even-Odd Jitter" from the entire document.
It is used in the following locations:
128.7.1, P106, L28, L30
128.7.1.8, P110, L40
128.7.1.9, P110, L47, L48
128.7.2.1, P112, L22
130.7.1, P140, L28, L31
130.7.1.8, P144, L42
130.7.1.9, P144, L48, L49
130.7.2.1, P147, L22
130.10.4.4, P152, L47
128A.3.1, P164, L26
128A.3.1.6, P167, L1, L2
128A.3.3, P171, L25
128B.2.1, P180, L19, L21
130A.3.1, P206, L26
130A.3.1.6, P209, L18, L19
130A.3.3, P213, L28
130B.2.1, P222, L17, L19

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add note to end of 128.7.1.9 and 130.7.1.9 :

NOTE—Duty Cyle Distortion is also referred to as Even-odd jitter (see 92.8.3.8.1).

Cl **128** *SC* **128.7.1.2** *P* **107** *L* **28** # 176

Hidaka, Yasuo Fujitsu Lab of America

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

This clause specifies not only impedance of test fixture, but also return loss of test fixture.

SuggestedRemedy

Change the title of clause from "Test fixture impedance" to "Test fixture characteristics".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Apply this change to:
128.7.1.2 and 130.7.1.2.

Cl **128** *SC* **128.7.1.2** *P* **107** *L* **30** # 177

Hidaka, Yasuo Fujitsu Lab of America

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

"f" is not italic face.

SuggestedRemedy

Make "f" italic face.

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.7.1.2** *P* **107** *L* **31** # 293

Donahue, Curtis UNH-IOL

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

"The differential The differential return loss,"

SuggestedRemedy

Change to "The differential return loss,"

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.7.1.2** *P* **107** *L* **34, 3** # 127
Smith, Daniel Seagate

Comment Type **ER** *Comment Status* **A**
ReturnLoss is not consistant with other usage.

SuggestedRemedy
change to: Return_Loss

Response *Response Status* **W**
ACCEPT.

Cl **128** *SC* **128.7.1.4** *P* **107** *L* **50** # 138
Smith, Daniel Seagate

Comment Type **TR** *Comment Status* **A**
change to be a "maximum"

SuggestedRemedy
should read:
shall be less than or equal to 1200 mV.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Double-documentation. Use table values instead.

Change text to:
For a 1010 pattern, the Differential peak-to-peak output voltage is defined in Table 128-4.

Cl **128** *SC* **128.7.1.4** *P* **107** *L* **54** # 203
Lusted, Kent Intel

Comment Type **TR** *Comment Status* **A**
The minimum peak-to-peak transmitter amplitude is not specified in the specification. It is inferred to be >720mV in the "EEE capability" paragraph on page 108, linke 19. However, it is this reader's interpretation of that EEE paragraph that the >720 requirement only applies to PHYs that support the optional EEE.

SuggestedRemedy
Sufficiently define the minimum peak-to-peak amplitude for the transmitter.

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

In Table 128-4 and Table 130-4 add a new row for
Differential peak-to-peak output voltage (min)
as 800 mV.

Cl **128** *SC* **128.7.1.4** *P* **108** *L* **1** # 139
Smith, Daniel Seagate

Comment Type **TR** *Comment Status* **A**
change to be a "maximum"

SuggestedRemedy
should read:
shall be less than or equal to 30 mV peak-to-peak,

Response *Response Status* **C**
ACCEPT.

Double-documentation. Use table values instead.

Change text to:
The Differential peak to peak output voltage when TX is disabled is defined in Table 128-4.

Cl **128** *SC* **128.7.1.4** *P* **108** *L* **6** # 294
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
In Figure 128-3, it says "SL<p> - SLn<n>".

SuggestedRemedy
Change to "SL<p> - SL<n>".

Response *Response Status* **C**
ACCEPT.

Cl **128** *SC* **128.7.1.4** *P* **108** *L* **17** # 178
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **T** *Comment Status* **A**
Here, it is said that the common-mode voltage shall be between -0.2 and 1.9V, whereas Table 128-4 specifies it between 0 and 1.9V.

SuggestedRemedy
Change "-0.2" with "0".

Or, make a correction to the table.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Change "-0.2" with "0".

Cl **128** *SC* **128.7.1.4** *P* **108** *L* **19** # 140

Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

should read:
shall be less than or equal to 30 mV within

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Double-documentation. Use table values instead.

Change text to:
For EEE capability, the transmitter's differential peak-to-peak output voltage is defined in Table 128-4 within 500 ns of tx_mode being set to QUIET and remain so while tx_mode is set to QUIET.

Cl **128** *SC* **128.7.1.5** *P* **108** *L* **31, 3** # 128

Smith, Daniel Seagate

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

ReturnLoss is not consistant with other usage.

SuggestedRemedy

change to: Return_Loss

Response *Response Status* **W**

ACCEPT.

Cl **128** *SC* **128.7.1.5** *P* **109** *L* **21** # 179

Hidaka, Yasuo Fujitsu Lab of America

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

Equation 128-3 specifies the return loss from 100MHz, whereas Figure 128-4 specifies the return loss from 10MHz.

SuggestedRemedy

Change Figure 128-4 frequency to start from 100MHz.

Response *Response Status* **C**

ACCEPT.

[Editor's note: Dan to correct plot and provide bmp file to editor.]

Cl **128** *SC* **128.7.1.6** *P* **109** *L* **42** # 295

Donahue, Curtis UNH-IOL

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

"The minimum differential return loss is shown in Figure 128-5". Should be "The minimum common-mode output return loss is shown in Figure 128-5". Also the title to Figure 128-5 is wrong.

SuggestedRemedy

1) Change "The minimum differential return loss is shown in Figure 128-5" to "The minimum common-mode output return loss is shown in Figure 128-5".

2) Change the title of Figure 128-5 to "Trasnmitter common-mode return loss".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.
1) Change "The minimum differential return loss is shown in Figure 128-5" to "The minimum common-mode output return loss is shown in Figure 128-5".

2) Change the title of Figure 128-5 to "Transmitter common-mode return loss".

[Editor's note: same as comment #1, but without the '-' before "mode". The hyphen will be added for consistency.]

Cl **128** *SC* **128.7.1.7** *P* **110** *L* **29** # 180

Hidaka, Yasuo Fujitsu Lab of America

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

Here, a reference to 128B.1 is made, but there is not high-frequency test pattern in 128B.1. The high-frequency test pattern is defined in 36A.1.

SuggestedRemedy

Change the reference to 128B.1 with a reference to 36A.1.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

128B has been deleted and replaced with changes to 69A.

See file
http://www.ieee802.org/3/cb/public/nov16/mcmillan_3cb_03_CombinedAnnex%2069A128B130B_20161107.pdf

Cl **128** *SC* **128.7.1.7** *P* **110** *L* **28, 3** # 150

Smith, Daniel Seagate

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

Rise/fall time ranges are ambiguous.

SuggestedRemedy

change wording to:
... transition time shall be from 30 ps to 100 ps, as measured at...

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Replace both sentences with:

The transition time shall as shown in Table 128-4 using the high-frequency test pattern of 128B.1.

[Editor's note: the reference to test pattern may change. 128B.1 is incorrect.]

Cl **128** *SC* **128.7.1.8** *P* **110** *L* **38** # 270

Healey, Adam Broadcom Ltd.

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

The subclause states that "The data pattern for jitter measurements shall be the test patterns 2 or 3 as defined in 52.9.1.1." Test pattern 2 emulates 64B/66B encoding and test pattern 3 is PRBS31. Are these appropriate test patterns for an 8B/10B encoded link?

SuggestedRemedy

Reevaluate the choice of jitter test patterns for 2.5GBASE-KX.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The data pattern for jitter measurements shall be a square wave as defined in 52.9.1.2 with 5 consecutive 1's and 0's.

See file
http://www.ieee802.org/3/cb/public/sep16/patra_3cb_01_0916_Jitter.pdf

Change from: "The data pattern for jitter measurements shall be the test patterns 2 or 3 as defined in 52.9.1.1."
to
"The data pattern for jitter meashrements shall be a low frequency test pattern as defined in 36A.2."

Cl **128** *SC* **128.7.1.8** *P* **110** *L* **39** # 181

Hidaka, Yasuo Fujitsu Lab of America

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

Test pattern 2 and 3 in 52.9.1.1 are defined for 10GBASE-R which uses 64B66B encoding. They are too much stressful for 8B10B links due to large DC wonder that do not exist after 8B10B encoding, and not recommended.

SuggestedRemedy

Use jitter tolerance test pattern defined in 48A.5 and use jtransmitter jitter test requirements in 71.7.1.9.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Refer to comment #270.

Cl **128** *SC* **128.7.1.9** *P* **110** *L* **46** # 296

Donahue, Curtis UNH-IOL

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

Typos. "C" in "Component" and "peak-to-peaks".

SuggestedRemedy

Change sentence to "... deterministic component of 0.15 UI peak-to-peak and a ..."

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.7.1.10** *P* **111** *L* **2** # 297

Donahue, Curtis UNH-IOL

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

128.7.1.10 Transmitter output waveform defines symbol periods and voltages for a square test pattern that is used for the "transmitter output waveform test". However, there aren't any electrical requirements involving these times and voltages. Does Clause 128 even need a transmitted output waveform test? It does not include equalization so is it necessary? CL70 1000BASE-KX also does not define an equalizer and is missing a subclause equivalent to 128.7.1.10.

SuggestedRemedy

Either

a) Remove 128.7.1.10 including associated text and diagrams.

or

b) Add electrical requirements involving the test pattern voltages, similar to those found in 72.7.1.11.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove 128.7.1.10 including associated text and diagrams.

Cl **128** *SC* **128.7.1.10** *P* **111** *L* **4** # 249

Healey, Adam Broadcom Ltd.

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

A procedure for the measurement for v1 and v2 is provided but no requirements on the values of v1 and v2 are given.

SuggestedRemedy

Include requirements for v1 and v2 or, if there are no requirements, remove the subclause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE, see comment #297, subclause 128.7.1.10 has been deleted.

Cl **128** *SC* **128.7.1.10** *P* **111** *L* **7** # 204

Lusted, Kent Intel

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

Figure 128-6 has a shadowing feature enabled that reduces readability.

SuggestedRemedy

Remove shadowing.

Response *Response Status* **W**

ACCEPT.
[Editor's note: this figure is an imported graphic that must be corrected outside of Framemaker.]

Cl **128** *SC* **128.7.1.10** *P* **111** *L* **26** # 205

Lusted, Kent Intel

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

For v1 and v2, the average voltage in the interval t1 to t2 includes the shoulder rise/fall times of the waveform. this artificially reduces the measured voltage from the true amplitude of the waveform at the midpoint.

SuggestedRemedy

consider defining a window in the flat portion of the waveform, away from the rise and falling edges, as the steady state voltage. see figure 72-12 for inspiration.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

See comment #192 and #193.
[Editor's note: this figure is an imported graphic that must be corrected outside of Framemaker.]

Cl **128** *SC* **128.7.2.1** *P* **112** *L* **3** # 151
Smith, Daniel Seagate

Comment Type **ER** *Comment Status* **A**
plural missing

SuggestedRemedy
should read:
The receiver interference tolerance consists...

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Should be worded:
The receiver interference tolerance shall consist of the test as described in Annex 69A with the parameters specified in Table 128–6.

[Editor's note: comment 128B is being changed to 69A in comments 118 and 119.]

Cl **128** *SC* **128.7.2.1** *P* **112** *L* **5** # 182
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **T** *Comment Status* **A**
Clause 59.9.1.1 does not exist.
If this is intended to be test patterns 2 or 3 in 52.9.1.1, they are not recommended, because they are defined for 10GBASE-R which uses 64B66B encoding. They are oto much stressful for 8B10B links due to large DC wonder that do not exist after 8B10B encoding.

SuggestedRemedy
Use continuous jitter test pattern as defined in Annex 48A.5. See 71.7.2.1.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Use test pattern as defined in Annex 36A.4.

Cl **128** *SC* **128.7.2.5** *P* **113** *L* **3** # 183
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **E** *Comment Status* **A**
"f" is not italic face.

SuggestedRemedy
Make "f" italic face.

Response *Response Status* **C**
ACCEPT.

Cl **128** *SC* **128.8** *P* **113** *L* **10** # 250
Healey, Adam Broadcom Ltd.

Comment Type **ER** *Comment Status* **A**
The interconnect requirements are defined in Annex 128C.

SuggestedRemedy
Correct the reference.

Response *Response Status* **C**
ACCEPT.

Cl **128** *SC* **128.10.3** *P* **115** *L* **9** # 184
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **E** *Comment Status* **A**
PCS is mandatory.

SuggestedRemedy
Remove "No []" in the support column for PCS.

Response *Response Status* **C**
ACCEPT.

Cl **128** *SC* **128.10.3** *P* **115** *L* **28** # 186
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **E** *Comment Status* **A**
TD is mandatory if EEE is supported.

SuggestedRemedy
Change "No []" with "N/A []" in the support column for TD.

Response *Response Status* **C**
ACCEPT.

Cl **128** *SC* **128.10.3** *P* **115** *L* **28** # 185

Hidaka, Yasuo — Fujitsu Lab of America

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

EEE is referred, but not defined.

SuggestedRemedy

Add a row to define EEE.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

EEE function is reflected in LPI which is defined above in same table. And TD row in the same table state "EEE:M" that is wrong. It is to be changed to "LPI:M".

Cl **128** *SC* **128.10.4.1** *P* **115** *L* **53** # 6

Laubach, Mark — Broadcom Limited

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

There are three occurences in this PICS section where the bottom horizontal line of a table is missing. The line needs to be there so we know that text hasn't fallen off the page also. Adjust whatever FM issue is causing this (never seen it before so can't recommend.)

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.10.4.1** *P* **116** *L* **27** # 133

Smith, Daniel — Seagate

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

Loopback function not effected

SuggestedRemedy

s/b: affected, not effected (it's a verb)

Response *Response Status* **C**

ACCEPT.

[Editor's note: also changed in
128.6.5 p104 line 38
130.6.5 p140 line 31
]

Cl **128** *SC* **128.10.4.1** *P* **116** *L* **35** # 134

Smith, Daniel — Seagate

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

Loopback affect on Transmitter

SuggestedRemedy

s/b: Loopback effect on Transmitter (effect is a noun, a result, not an action word)

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.10.4.3** *P* **117** *L* **19** # 141

Smith, Daniel — Seagate

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

change to be a "maximum"

SuggestedRemedy

Value/Comment column should read:
Less than or equal to 30 mV within 500 ns of tx_mode = QUIET

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

For row TC3: remove '<' symbol in front of <1200 mV, pk-pk. Change maximum to (max).

For row TC4, change to:
Tx differential output voltage (max) when disabled.
Remove '<' from 30 mV, pk-pk.

Cl **128A** *SC* **128A.1** *P* **159** *L* **13** # 255

Healey, Adam Broadcom Ltd.

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

Since this is an Annex to Clause 128, it seems reasonable to assume that transmitters and receivers that satisfy the Clause 128 requirements are suitable for this application. If this is the case, then it seems TP0D-H and TP0H-D should be equivalent to TP1 in Clause 128, and TP5D-H and TP5H-D should be equivalent to to TP4 in Clause 128. If so, then it seems that channel between TP0D-H and TP5H-D (or TP0H-D and TP5D-H) is simply a specific partitioning of the generic channel described in Annex 128C. If all of this is correct, then it seems that the text and/or test point definitions should be modified to make this clear. If it is not correct, then the relationship between this interface and clause it is associated with is unclear. Is this Annex defining a completely different PMD?

SuggestedRemedy

Clarify the relationship between a 2.5GBASE-KX PMD and the 2.5GSEI.

Response *Response Status* **C**

ACCEPT.
[Editor's note: the commenter agreed to change the paragraph as follows, by adding this before the last sentence:

The compliance point definitions provide a unique partitioning of the channel defined in Annex 128C, such that the test points TP0D-H and TP0H-D defined in this Annex are equivalent to TP1 defined in Annex 128C, and TP5D-H and TP5H-D defined in this Annex are equivalent to TP4 defined in Annex 128C.
]

Cl **128A** *SC* **128A.1** *P* **160** *L* **8** # 194

Hidaka, Yasuo Fujitsu Lab of America

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

The definitions of the compliance points, the host compliance board, and the drive compliance board are not clearly shown in the figures. For instance, the output of PMD transmit function is labeled as TP0_D-H in Figure 128A-1, but labeled as TP1_D-H in Figure 128A-2. In Figure 128A-2, the loss from TP1_D-H to the connector input is 0.9dB in the top figure but 1.375dB in the middle figure.

SuggestedRemedy

Define the compliance points clear.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Fix figure 128A-2 to show the 2nd reference to TP1 as TP0 and elongate the path to make it look differrent.

[Editor's note: duplicate of #257]

Cl **128A** *SC* **128A.1** *P* **160** *L* **8** # 256

Healey, Adam Broadcom Ltd.

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

In Figure 128A-1, the test point adjacent to the PMD transmit function is TP0 but here it appears to be TP1. Which is correct?

SuggestedRemedy

Include the TX PCB before TP1 or change the test point to TP0.

Response *Response Status* **C**

ACCEPT.

Fix figure 128A-2 to show the 2nd reference to TP1 as TP0 and elongate the path to make it look differrent.

[Editor's note: duplicate of #257]

Cl **128A** *SC* **128A.1** *P* **160** *L* **27** # 257

Healey, Adam Broadcom Ltd.

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

Why is the loss from TP1D-H to the connector 0.9 dB in one part of the figure and 1.375 dB in another part of the figure. What has changed? Similarly for the TP1 to TP5 insertion loss.

SuggestedRemedy

Clarify the difference between the diagrams in Figure 128A-2.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Fix figure 128A-2 to show the 2nd reference to TP1 as TP0 and elongate the path to make it look differrent.

See file
http://www.ieee802.org/3/cb/public/sep16/calbone_3cb_02_0916.pdf

Cl **128A** *SC* **128A.1.1** *P* **161** *L* **29** # 148
Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

Value/Comment column should read:
The bit error ratio (BER) shall be less than or equal to 10-12 with any errors...

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **128A** *SC* **128A.2** *P* **163** *L* **17** # 264
Healey, Adam Broadcom Ltd.

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

In the second part of the figure, it seems the test point at the PMD receiver function should be TP5H-D. the test point at the connection interface should be TP4H-D, the "Tx PCB" should be "Rx PCB", and the AC coupling capacitors shown between the TP4 and TP5.

SuggestedRemedy

Modify the figure per the comment.

Response *Response Status* **C**

ACCEPT.
File: calbone_3cb_01_0916.pdf

Cl **128A** *SC* **128A.3.1** *P* **164** *L* **1** # 21
Hajduczenia, Marek Charter Communicatio

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

Table 128A-1 uses "max." and "max" - which is it supposed to be?

SuggestedRemedy

Please use "max." consistently. The same goes for "min."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change all instances of (max.) to (max) and all instances of (min.) to (min) throughout the entire Draft.

Cl **128A** *SC* **128A.3.1** *P* **164** *L* **7** # 74
Calbone, Anthony Seagate

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

The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy

Widen Units column so the whole word fits into one line.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.1** *P* **164** *L* **17** # 73
Calbone, Anthony Seagate

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

The return loss value is pointing to both an insertion loss and return loss equation.

SuggestedRemedy

Change the value to "See Equation (128A-2)"

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.1.2** *P* **165** *L* **6** # 298
Donahue, Curtis UNH-IOL

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

In Figure 128A-6 there are two instances of "SL<p>". One of them should be "SL<n>". Same things appears in Figure 120A-6 in 130A.3.1.2.

SuggestedRemedy

Change one of the "SL<p>" to "SL<n>" in Figure 128A-6 and 130A-6.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.1.4.1** *P* **166** *L* **32** # 195

Hidaka, Yasuo Fujitsu Lab of America

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

The linear pulse fitting procedure in 94.3.12.5.2 is for PAM4 signal, and PRBS13Q is a PAM4 test pattern.

SuggestedRemedy

Use the linear pulse fitting procedure for NRZ that is described in 92.8.3.5.1 and use PRBS9 test pattern.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #258.

Cl **128A** *SC* **128A.3.1.4.1** *P* **166** *L* **33** # 236

Ewen, John GlobalFoundries

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

Why is a PAM4 pattern used for the linear fit pulse response when normal operation uses NRZ? Also the reference to 120.5.10.2.3 appears incorrect.

SuggestedRemedy

Use a PRBS9 test pattern for the linear pulse fit as specified in 120.5.11.1.2

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Comment #258 is the correct text and references needed here.

Cl **128A** *SC* **128A.3.1.4.1** *P* **166** *L* **33** # 126

Slavick, Jeff Broadcom Limited

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

PRBS13Q is a PAM4 data pattern. If you want to use a NRZ PRBS13 pattern for Linear fit measurements you'll need to add that pattern to Clause 127

SuggestedRemedy

Add PRBS13 pattern definition, using the same polynomial that PRBS13Q uses to Clause 127 for use by 128A

Response *Response Status* **W**

ACCEPT.

Same as comment #258.

Cl **128A** *SC* **128A.3.1.4.1** *P* **166** *L* **33** # 235

Ewen, John GlobalFoundries

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

Is Np=100 correct? This seems an order of magnitude larger than other clauses.

SuggestedRemedy

Change to Np=3 to be consistent with SNDR definition in 128A.3.1.7

Response *Response Status* **C**

REJECT.

Np=100 is correct.

[Editor note: Related to comment #259.]

Cl **128A** *SC* **128A.3.1.4.1** *P* **166** *L* **33** # 258

Healey, Adam Broadcom Ltd.

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

PRBS13Q is a PAM4 test pattern and seems to be inappropriate for this interface. Furthermore, 94.3.12.5.2 pertains to the measurement of PAM4 signals. Note the similar issue with 128A.3.3.1.

SuggestedRemedy

Change the reference to 92.8.3.5 or a similar NRZ-based measurement procedure. Note that 92.8.3.5 specified the use of PRBS9 so no expection for the test pattern would likely be required in this case.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the wording to the text shown below.

The linear fit pulse response is characterized using the procedure described in 92.8.3.5.1 with the exception that the measurement is performed at TP4H-D rather than TP2 and Np =100.

Cl **128A** *SC* **128A.3.1.4.2** *P* **166** *L* **40** # 259

Healey, Adam Broadcom Ltd.

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

Table 128A.3.1 already states that "A 2.5GSEI host output shall meet the specifications defined in Table 128A–1 if measured at TP4H-D" and Table 128A-1 includes the parameters defined in this subclause. It is not necessary to state the requirements again.

SuggestedRemedy

Remove the last two sentences from this subclause. Note similar issues in 128A.3.1.6, 128A.3.1.7, 128A.3.3.2, and 128A.3.3.3.

Response *Response Status* **C**

ACCEPT.

[Editor's note:
a) completed 128A.3.1.6 and 128A.3.3.2.
b) Deleted the first sentence in 128A.3.1.7 and 128A.3.3.3]

Cl **128A** *SC* **128A.3.1.5** *P* **166** *L* **49** # 299

Donahue, Curtis UNH-IOL

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

"5"

SuggestedRemedy

Change to "five".

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.1.6** *P* **166** *L* **54** # 260

Healey, Adam Broadcom Ltd.

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

If the maximum permitted deterministic jitter is 0.12 UI and the maximum permitted random jitter is 0.2 UI, how could a compliant implementation exhibit jitter in excess of 0.32 UI? The specification seems to set the maximum jitter to 0.35 UI despite this.

SuggestedRemedy

Check the jitter math. Note that DCD is considered a component of deterministic jitter as stated in 128A.3.1.6.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In Table 128A-1:
Change maximum Tj to 0.32 UI.

See file
http://www.ieee802.org/3/cb/public/sep16/patra_3cb_01_0916_Jitter_number.pdf

Change "Duty Cycle Distortion" line by indenting it and changing text to:
Duty Cycle Distortion (included in Dj)

Cl **128A** *SC* **128A.3.2** *P* **167** *L* **17** # 75

Calbone, Anthony Seagate

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

The second sentence is inconsistent with the other input characteristics sections.

SuggestedRemedy

Remove the second sentence: "The test transmitter then transmits any valid PCS output (such as scrambled idle)."

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2** *P* **167** *L* **23** # 78

Calbone, Anthony Seagate

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

The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy

Widen Units column so the whole word fits into one line.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2** *P* **167** *L* **24** # 22
Hajduczenia, Marek Charter Communicatio

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

no need to break the line in "See Equation (128A-2)" statement - extend the size of Value column and shrink the Parameter column to compensate. Also, extend the size of Units column to make sure "s" is not forced into line 2.
Also, add "-" in Units column where no units are present / needed

SuggestedRemedy

Per comment- there are multiple tables in the draft that need the associated change.
Please make sure all tables have "-" in Units column where no units are needed / defined.

Response *Response Status* **C**

ACCEPT.

Put "-'" in all blank 'Units' cells of all tables throughout the draft.

Wherever the words are extending to a new line, adjust the column widths of the tables until this is resolved, throughout the draft.

Cl **128A** *SC* **128A.3.2** *P* **167** *L* **27** # 76
Calbone, Anthony Seagate

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

The interference tolerance Subclause reference is incorrect

SuggestedRemedy

Change 128A.3.2.1 to 128A.3.2.2

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2** *P* **167** *L* **28** # 77
Calbone, Anthony Seagate

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

The jitter tolerance Subclause reference is incorrect

SuggestedRemedy

Change 128A.3.2.1 to 128A.3.2.3

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2.2** *P* **167** *L* **38** # 199
Hidaka, Yasuo Fujitsu Lab of America

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

It is not clear how the crosstalik is applied in the receiver interference tolerance test. In Figure 128A-9, the crosstalk is applied only during the calibration. Also, Figure 128A-8 and 128A-9 seem identical.

SuggestedRemedy

Apply crosstalk during test.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Agree to add crosstalk requirement for the Tx driver that provides the crosstalk during a receiver interference test. This will require a procedure to be created and approved by the commenter.

(From file: calbone_3cb_01_0916.pdf)
- remove the TX that was present during calibration

- move noise injection to after the ISI channel

- text and figures need to change

- change 128A.3.2.2, 128A.3.4.2, 130A.3.2.2, 130A.3.4.2 according to documents
…. Calbone_3cb_02_0916.pdf (and)
…. Calbone_3cb_03_0916.pdf

- note changes to figures 128A-8, 128A-9, 130A-8 and 130A-9

Cl **128A** *SC* **128A.3.2.2** *P* **167** *L* **40** # 79
Calbone, Anthony Seagate

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

The Figure 128A-9 reference is incorrect.

SuggestedRemedy

Change 128A-9 to 128A-8.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2.2** *P* **168** *L* **30** # 9

Laubach, Mark Broadcom Limited

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

What is "Termination", e.g., definition, requirements, etc.? Searching the draft, can only find this word in this and similar Cl 128A figures. So, what is the proper termination for the calibration and test setups?

SuggestedRemedy

Define termination as used in this draft.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add footnote with asterisk on first instance with the words:

* The single-ended transmit signals are terminated in 50 ohms to provide a 100 ohm differential termination.

[Editor's note: first occurance is Figure 128A-8.]

Cl **128A** *SC* **128A.3.2.3** *P* **168** *L* **52** # 80

Calbone, Anthony Seagate

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

The Figure 128A-10 reference is incorrect.

SuggestedRemedy

Change 128A-10 to 128A-9.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2.3** *P* **168** *L* **52** # 200

Hidaka, Yasuo Fujitsu Lab of America

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

Table 128A-10 is applied peak-to-peak sinusoidal jitter.

SuggestedRemedy

Change the reference to Figure 128A-10.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.2.3** *P* **169** *L* **1** # 201

Hidaka, Yasuo Fujitsu Lab of America

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

the host interference tolerance test

SuggestedRemedy

the host jitter tolerance test

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace with:

the jitter tolerance test

Cl **128A** *SC* **128A.3.2.3** *P* **170** *L* **11** # 8

Laubach, Mark Broadcom Limited

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

The alignment of box corners, lines, and arrows could be improved. Arrow heads in the same diagram should most often be the same size. In many figures, text is uncomfortably close to lines, boxes, and the figure caption. Generally, I like to be specific for page and line, but after getting through the entire doc some over all neatening might be nice (yes, I know it might be considered time consuming....)

SuggestedRemedy

Suggested, as per comment.

Response *Response Status* **C**

ACCEPT.

[Editor's note: this varies by the viewer. The Frame sources look ok. Please identify specific figures to change.]

Cl **128A** *SC* **128A.3.3** *P* **171** *L* **7** # 82

Calbone, Anthony Seagate

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

The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy

Widen Units column so the whole word fits into one line.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.3** *P* **171** *L* **8** # 23
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
Is "per lane (range)" really intended to be crossed out?

SuggestedRemedy
Remove the cross-out
Similar issue on page 206, line 8

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Same as comment #63.

Cl **128A** *SC* **128A.3.3** *P* **171** *L* **8** # 63
Anslow, Pete Ciena

Comment Type **T** *Comment Status* **A**
"per lane (range)" is shown in strikethrough font which is inappropriate for a new annex. Since this parameter is indeed a range (not a min or max value), "(range)" seems correct.

SuggestedRemedy
replace "per lane (range)" with "(range)" in normal font.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

[Editor's note: duplicate of #23]

[Editor's note: delete 'per lane (range)']

Cl **128A** *SC* **128A.3.3** *P* **171** *L* **9** # 81
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
Text is crossed out in the signaling rate parameter

SuggestedRemedy
Remove the "per lane (range)" text that is crossed out.

Response *Response Status* **C**
ACCEPT.
[Editor's note: duplicate of #23]

Cl **128A** *SC* **128A.3.3** *P* **171** *L* **28** # 83
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Signal-to-noise-and-distortion ratio (min) Subclause reference is incorrect.

SuggestedRemedy
Change 128A.3.3.2 to 128A.3.3.3

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.3.3.1** *P* **171** *L* **36** # 196
Hidaka, Yasuo Fujitsu Lab of America

Comment Type **TR** *Comment Status* **A**
The linear pulse fitting procedure in 94.3.12.5.2 is for PAM4 signal, and PRBS13Q is a PAM4 test pattern.

SuggestedRemedy
Use the linear pulse fitting procedure for NRZ that is described in 92.8.3.5.1 and use PRBS9 test pattern.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

See comment #258.

Cl **128A** *SC* **128A.3.3.1** *P* **171** *L* **38** # 237
Ewen, John GlobalFoundries

Comment Type **T** *Comment Status* **R**
Is Np=100 correct? This seems an order of magnitude larger than other clauses.

SuggestedRemedy
Change to Np=3 to be consistent with SNDR definition in 128A.3.3.3

Response *Response Status* **C**
REJECT.

Np=100 is correct.

[Editor note: Related to comment #259.]

Cl **128A** *SC* **128A.3.3.1** *P* **171** *L* **38** # 238
Ewen, John GlobalFoundries

Comment Type **T** *Comment Status* **A**
Why is a PAM4 pattern used for the linear fit pulse response when normal operation uses NRZ? Also the reference to 120.5.10.2.3 appears incorrect.

SuggestedRemedy
Use a PRBS9 test pattern for the linear pulse fit as specified in 120.5.11.1.2

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

See comment #258.

Cl **128A** *SC* **128A.3.3.2** *P* **171** *L* **8** # 300
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
Remove the striked out text "per lane (range)".

SuggestedRemedy
See comment.

Response *Response Status* **C**
ACCEPT.
[Editor's note: same as #23]

Cl **128A** *SC* **128A.3.3.2** *P* **171** *L* **43** # 84
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is an extra parenthesis around p(k)

SuggestedRemedy
Remove the extra parathesis. Change p(k)) to p(k).

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.3.4** *P* **172** *L* **8** # 85
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy
Widen Units column so the whole word fits into one line.

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.3.4.3** *P* **173** *L* **35** # 86
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Figure 128A-10 reference is incorrect.

SuggestedRemedy
Change 128A-10 to 128A-11.

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.4.2.1** *P* **175** *L* **21** # 69
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
Comment i-52 against P802.3bx D3.0 changed all instances of “enquiries” to "inquiries" in the base standard.

SuggestedRemedy
Change “enquiries” to "inquiries" here, in 128B.4.2.1, 128D.4.2.1, and 130A.4.2.1

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Globally replace "enquiries" with "inquiries".

Cl **128A** *SC* **128A.4.2.2** *P* **175** *L* **36** # 64
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
"Annex title" should be replaced by the annex title!

SuggestedRemedy
Replace "Annex title" with "2.5Gb/s Storage Enclosure Interface (2.5GSEI)"

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.4.2.2** *P* **175** *L* **42** # 24
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
I do not think 802.3cb will be published in 2016.

SuggestedRemedy
Please change all references to "802.3cb-2016" to "802.3cb-201x"

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.4.4** *P* **176** *L* **16** # 66
Anslow, Pete Ciena

Comment Type **T** *Comment Status* **A**
"10E-12" is equivalent to 1E-11 and also not in the format used in 802.3.

SuggestedRemedy
Change to "10-12" where "-12" is a superscript.
Make the same change in 128A.4.4.2 (2 places), 128A.4.4.4 (2 places), 130A.4.4, 130A.4.4.2 (2 places), 130A.4.4.4 (2 places)

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.4.4** *P* **176** *L* **16** # 25
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
We do not use "E" based description for BER very often

SuggestedRemedy
Change "BER < 10E-12" to proper format as seen in 128A.1.1
Same for HI4, HI6, DI4, DI6
more of "E" based BER values in Table 128C–1
There are more instances in text and in PICS that need to be replaced.

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.4.4** *P* **176** *L* **16** # 65
Anslow, Pete Ciena

Comment Type **T** *Comment Status* **A**
The abbreviation "BER" stands for "bit error ratio", not "bit error rate"

SuggestedRemedy
Change "Bit Error Rate" to "Bit error ratio" in 128A.4.4 and 130A.4.4

Response *Response Status* **C**
ACCEPT.

Cl **128A** *SC* **128A.4.4.2** *P* **177** *L* **4** # 67
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html says that "The symbol 'bps' is not used, instead 'b/s' is used"

SuggestedRemedy
Change "Gbps" to "Gb/s" in 128A.4.4.2 (2 places), 128A.4.4.4 (2 places), 130A.4.4.2 (2 places), 130A.4.4.4 (2 places)

Response *Response Status* **C**
ACCEPT.

Cl **128B** *SC* **128B** *P* **179** *L* **5** # 118
D'Ambrosia, John Futurewei, Subsidiary

Comment Type **ER** *Comment Status* **A**
Annex 128B is primarily a duplication of Annex 69B. Such duplication should be avoided.

SuggestedRemedy
There are two options
1.delete annex 128B - modify annex 69B to add in specific requirements related to 2.5GBASE-KR
2. Delete redundant text in annex 128b, and replace in each instance with pointer to the original text in Annex 69B

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

Use solution #1.
Delete annex 128B, and place 2.5G information into 69A.

Cl **128B** *SC* **128B.2.4** *P* **181** *L* **25** # 301
Donahue, Curtis UNH-IOL

Comment Type **TR** *Comment Status* **A**
Since Clause 128 doesn't define equalization is this transmitter control necessary? It's only used to change equalizor values during the receiver interference tolerance test.

SuggestedRemedy
Remove 128B.2.4

Response *Response Status* **C**
ACCEPT.

Cl **128B** *SC* **128B.3** *P* **181** *L* **40** # 302
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
Looks like this sentence is missing a subclause reference, "in for 2.5GBASE-KX".

SuggestedRemedy
Change to "in 128.7.2.1 for 2.5GBASE-KX."

Response *Response Status* **C**
ACCEPT.

Cl **128B** *SC* **128B.4.4.2** *P* **183** *L* **44** # 26
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
We do have a special symbol for ">=" please see the front matter and table of symbols

SuggestedRemedy
Please replace all instances of ">=" with appropriate symbol. The same goes for "<="
See IG3 for proper symbols

Response *Response Status* **C**
ACCEPT.

Cl **128C** *SC* **128C.3** *P* **185** *L* **50** # 303
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
"100 (Ohm)+/- 10%".

SuggestedRemedy
Add space so the text reads "100 (Ohm) +/- 10%".

Note: Use Ohm symbol.

Response *Response Status* **C**
ACCEPT.

Cl **128C** *SC* **128C.3** *P* **185** *L* **50** # 27
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
Missing space in "100 ± 10%." - make sure "±" symbol has always spaces around it

SuggestedRemedy
Per comment

Response *Response Status* **C**
ACCEPT.

Cl **128C** *SC* **128C.4.1** *P* **186** *L* **24** # 304

Donahue, Curtis UNH-IOL

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

Top two rows of Table 128C-1 list parameters "F max" and "F min". Should be "f_max" and "f_min" where "_" represents subscript text.

SuggestedRemedy

Change to "f_max" and "f_min".

Response *Response Status* **C**

ACCEPT.

Capital F becomes lowercase f and MIN and MAX become subscripts.

Cl **128C** *SC* **128C.4.1** *P* **186** *L* **27** # 71

Anslow, Pete Ciena

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

802.3 does not use the format 2E-5 etc.

SuggestedRemedy

Change "2E-5" to 2 x 10-5" where "x" is a multiply sign (Ctrl-q 0) and "-5" is a superscript.
Change the numbers in the next three rows in an equivalent way.
Scrub the draft for other instances of this.

Response *Response Status* **C**

ACCEPT.

Cl **128C** *SC* **128C.4.3** *P* **188** *L* **2** # 272

Healey, Adam Broadcom Ltd.

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

Using Equation (128C-7), it appears the maximum insertion loss for 5GBASE-KR is allowed to be about 33.6 dB at 2.578125 GHz. This does not agree with a fitted attenuation limit of 13.4 dB at 2.578125 GHz and an insertion loss deviation limit of +/-2.8 dB at 2.578125 GHz. This implies the insertion loss should not exceed 16.2 dB at that frequency.

SuggestedRemedy

Revisit the insertion loss equation for 5GBASE-KR.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Corrected equation 128C-7 was incorrect and was changed, and Figure 128C-3 was replotted.

See file
http://www.ieee802.org/3/cb/public/sep16/patra_3cb_01_0916_IL.pdf

See replot at
http://www.ieee802.org/3/cb/public/nov16/Fig%20128C-3%20-%20Insertion%20Loss.png

Cl **128C** *SC* **128C.4.3** *P* **188** *L* **13** # 273

Healey, Adam Broadcom Ltd.

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

Equation (128C-7) states the range of the limit to be fmax, and in Table 128C-1, fmax is assigned a value of 7 GHz. However, Figure 128C-3 only plots the limit to about 2.25 GHz and it is unclear how the curve applies to 2.5GBASE-KX and 5GBASE-KR (compare to Figure 128C-2).

SuggestedRemedy

Replace the plot with one that illustrates the limit over the specified frequency range and annotate the plot so show how it applies to 2.5GBASE-KX and 5GBASE-KR respectively (including the "high confidence" regions").

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Creating new equation and plot for 5GBASE-KR.

Changed Figure 128C-3 for updated equation for 2.5GBASE-KX.

Implement the changes in file:
calbone_3cb_01_1109.pdf

Cl **128C** *SC* **128C.4.4** *P* **188** *L* **41** # 129
Smith, Daniel Seagate

Comment Type **ER** *Comment Status* **A**
Missing parenthesis on the term: Af)

SuggestedRemedy
s/b: A(f)

Response *Response Status* **C**
ACCEPT.

Cl **128C** *SC* **128C.4.4** *P* **188** *L* **46** # 274
Healey, Adam Broadcom Ltd.

Comment Type **TR** *Comment Status* **A**
Equations (128C-9) and (128C-10) are incorrect.

SuggestedRemedy
Change "0.7^(-9)" to "0.7x10^(-9)" in both cases.

Response *Response Status* **C**
ACCEPT.
Exponent notation changed.

[Editor's note: is there a missing 'f' at the end of equation 128C-9 ?
Answer: yes, add the 'f' at the end of equation 128C-9.

Check Equation 130C-9.]

Cl **128C** *SC* **128C.4.6.1** *P* **190** *L* **34** # 305
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
Missing "(" in "PSNEXT)".

SuggestedRemedy
Change to "(PSNEXT)".

Response *Response Status* **C**
ACCEPT.

Cl **128D** *SC* **128D** *P* **193** *L* **6** # 269
Healey, Adam Broadcom Ltd.

Comment Type **T** *Comment Status* **A**
The title of this annex is "Test Fixtures for 2.5 Gb/s and 5 Gb/s Backplanes" but it only seems to define the test fixtures for the SEIs. Test fixtures are also defined in 128.7.1.1 and 130.7.1.1 which are presumably also backplane interfaces.

SuggestedRemedy
Rename the Annex to "Test Fixtures for Storage Enclosure Interfaces" or perhaps consolidate the Clause 128 and Clause 130 test fixture definitions into this annex.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Rename the Annex to "Test Fixtures for Storage Enclosure Interfaces".

Cl **128D** *SC* **128D** *P* **193** *L* **8** # 109
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
Figure 128D-1 is mentioned twice.

SuggestedRemedy
Consider revising to "test fixtures illustrated in Figure 128D-1" or something similar.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Change sentnece to:
Transmitter and receiver measurements are made utilizing the test fixtures specified in Figure 128D–1.

Cl **128D** *SC* **128D.1.2** *P* **193** *L* **50** # 28
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
text in lines 50-54 is shown in italics, but it is not part of the equation.

SuggestedRemedy
Please apply proper text tyle
Simialr problem on page 196, lines 50-52; page 202, line 54

Response *Response Status* **C**
ACCEPT.

Cl **128D** *SC* **128D.2** *P* **194** *L* **49** # 110

Calbone, Anthony Seagate

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

Title is incorrect

SuggestedRemedy

Change title to "Mated test fixtures"

Response *Response Status* **C**

ACCEPT.

Cl **128D** *SC* **128D.2.3** *P* **196** *L* **31** # 29

Hajduczenia, Marek Charter Communicatio

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

Tables are usually centered

SuggestedRemedy

Please center Table 128D-1

Response *Response Status* **C**

ACCEPT.

Cl **128D** *SC* **128D.2.3.1** *P* **196** *L* **39** # 306

Donahue, Curtis UNH-IOL

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

Title is identical to 128D.2.3.2 and not correct. Should be "Mated test fixture multiple disturber near-end crosstalk (MDNEXT) loss". Also, MDNEXT has been defined and used in other Clauses as "Multiple Disturber Near End Crosstalk" but here its spelt out as "single disturber near-end crosstalk".

SuggestedRemedy

1) Change the subclause title to "Mated test fixture multiple disturber near-end crosstalk (MDNEXT) loss".

2) Change "Single Disturber Near-End Crosstalk" to "Multiple Disturber Near-End Crosstalk".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

(From calbone_3cb_01_0916.pdf):
- change annex 128D according to document Calbone_3cb_04_0916.pdf)

Delete subclause:
128D.2.3.1 Mated test fixtures integrated crosstalk noise

In clause 128D, change all reference to MDNEXT to NEXT.

Change the subclause title to "Mated test fixture near-end crosstalk (NEXT) loss"

Take definition of NL from equation 128D-5, and add this same definition to equation 128D-8, directly below thre equation.

Cl **128D** *SC* **128D.2.3.2** *P* **197** *L* **19** # 307
Donahue, Curtis UNH-IOL

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

This subclause is either missing parameters (mostly far-end) or has some additional unnecessary parameters defined. For example Equations 128D-6 and 218D-7 are nearly identical, the difference is the use of Ant vs Aft but both equations are labelled as Wnt. Since Aft is not defined my guess is that there shouldn't be any far-end parameters in this section.

SuggestedRemedy

Either

a) Remove Equation 128D-7 and any references to that equation.

or

b) Add in far-end parameters to these definitions and rename Wnt in Eq. 128D-7 to Wft.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Adopt suggestion a).

(From calbone_3cb_01_0916.pdf):
- change annex 128D according to document Calbone_3cb_04_0916.pdf)

Cl **129** *SC* **129.1.3** *P* **120** *L* **15** # 187
Hidaka, Yasuo Fujitsu Lab of America

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

5GBASE-X PCS in Figure 129-1.

SuggestedRemedy

Change "5GBASE-X PCS" with "5GBASE-R PCS".

Response *Response Status* **C**

ACCEPT.
[Editor's note: duplicate of #308]

Cl **129** *SC* **129.1.3** *P* **120** *L* **16** # 308
Donahue, Curtis UNH-IOL

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

"5GBASE-X PCS". Should be "5GBASE-R PCS".

SuggestedRemedy

Change to "5GBASE-R PCS"

Response *Response Status* **C**

ACCEPT.

[Editor's note: duplicate of #187]

Cl **129** *SC* **129.1.4** *P* **121** *L* **17** # 309
Donahue, Curtis UNH-IOL

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

There seems to be an inconsistantcy between "5GBASE-R PMD" and "5GBASE-KR PMD", previously in the draft I only saw "5GBASE-KR PMD". Should be consistant throughout the draft.

SuggestedRemedy

Change all instances of "5GBASE-R PMD" to "5GBASE-KR PMD". I see "5GBASE-R PMD" in the following places.

Page 121, Line 17
Page 125, Line 5
Page 134, Line 24

Response *Response Status* **C**

ACCEPT.

Cl **129** *SC* **129.3.2.2** *P* **125** *L* **39** # 310
Donahue, Curtis UNH-IOL

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

This paragraph has 3 instances of "sixteen". The IEEE style manual stats the numbers less than 10 should be spelt out. To be consistant with other text in this draft and the 802.3 std, change "sixteen" to "16".

SuggestedRemedy

Change all instances of "sixteen" to "16".

Response *Response Status* **C**

ACCEPT.

Cl **129** *SC* **129.5** *P* **126** *L* **10** # 311
Donahue, Curtis UNH-IOL

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

"BT" is used in this paragraph to abbreviate "bit-times". But this is the on;y instance of "BT" I found in the draft. Should be consistant throughout draft.

SuggestedRemedy

Change "BT" to "bit-times"

Response *Response Status* **C**

ACCEPT.

Cl **129** *SC* **129.7.3** *P* **128** *L* **14** # 312
Donahue, Curtis UNH-IOL

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

"PCS" is used in the Value column of rows 3 and 4. Two major capabilities should not use the same name.

SuggestedRemedy

Change the "PCS" in row 4 to "BER".

Response *Response Status* **C**

ACCEPT.

Cl **129** *SC* **129.7.6.3** *P* **130** *L* **40** # 313
Donahue, Curtis UNH-IOL

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

The PICS table in 129.7.6.2 and 29.7.6.3 are identical.

SuggestedRemedy

Populate the PICS table in 129.7.6.3 with the appropriate text.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change 129.7.6.2 Loopback tabel to read:
Item: LB1
Feature: PMA Loopback
Subclause: 129.3.3
Value/Comment: conform to the requirements of Clause 51.8
Status: O
Support: Yes[] No[]

Cl **129** *SC* **129.7.6.6** *P* **131** *L* **25** # 355
Law, David HPE

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

Suggest we don't use dashes in PICS item designation.

SuggestedRemedy

Suggest that the item designations LP-0X be changed to read 'LPX'.

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.1** *P* **133** *L* **9** # 251
Healey, Adam Broadcom Ltd.

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

Clause 45 is not an external cross-reference since it is amended in this draft.

SuggestedRemedy

Make this a live cross-reference to Clause 45 and change the font color to black.

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.6.4** *P* **138** *L* **3** # 314
Donahue, Curtis UNH-IOL

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

"Global PMD signal detect function" should be "Global_PMD_signal_detect function"

SuggestedRemedy

Change to "Global_PMD_signal_detect function".

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.6.4** *P* **138** *L* **5** # 188
Hidaka, Yasuo Fujitsu Lab of America

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

It is too rough to say that the definition of the PMD signal detect function is beyond the scope of this specification.

SuggestedRemedy

Give a brief definition of the PMD signal detect function regarding to the functionality. It may be OK to say the detail implementation is beyond the scope of this specification.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Reword first four sentences of 130.6.4 to reflect signal detect function being out of the scope of this standard while allowing for such function to be implemented and stay compliant, for both EEE and non-EEE im[lementations.

Cl **130** *SC* **130.7.1.2** *P* **141** *L* **23** # 189
Hidaka, Yasuo Fujitsu Lab of America

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

This clause specifies not only impedance of test fixture, but also return loss of test fixture.

SuggestedRemedy

Change the title of clause from "Test fixture impedance" to "Test fixture characteristics".

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.7.1.2** *P* **141** *L* **34** # 190
Hidaka, Yasuo Fujitsu Lab of America

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

Equation 130-1 and 130-2 are not continuous at 2579 MHz.

SuggestedRemedy

Change the right hand side of Equation 130-2 as follows:

24 - 13.275 log_10 (f / 1289 MHz)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor action: check with contributor (Peter Wu) to validate the suggested remedy.]

[Editor's note: framemaker help needed]

Cl **130** *SC* **130.7.1.4** *P* **141** *L* **46** # 142
Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

should read:
shall be less than or equal to 1200 mV,

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Double documentation. Use table value instead. Text should read:

For a 1010 pattern, the peak-to-peak Differential peak-to-peak output voltage is defined in Table 130–4, regardless of equalization setting.

Cl **130** *SC* **130.7.1.4** *P* **141** *L* **47** # 143
Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

should read:
shall be less than or equal to 30 mV peak-to-peak

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Double documentation. Use table value instead. Text should read:

Differential peak-to-peak output voltage with TX disabled is defined in Table 130–4.

Cl **130** *SC* **130.7.1.4** *P* **142** *L* **5** # 315
Donahue, Curtis UNH-IOL

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

In Figure 130-3, "SL<p> - SLn<n>".

SuggestedRemedy

Change to "SL<p> - SL<n>".

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.7.1.4** *P* **142** *L* **17** # 144

Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

should read:
shall be less than or equal to 30 mV

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Double documentation. Use table value instead. Text should read:

For EEE capability, the transmitter's Differential peak-to-peak output voltage with TX disabled is defined in Table 130–4, within 500 ns of tx_mode being set to QUIET and remain so while tx_mode is set to QUIET.

Cl **130** *SC* **130.7.1.7** *P* **144** *L* **30** # 209

Lusted, Kent Intel

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

The rising and falling transition times requirement references v1 and v4. v4 is the pre-emphasis point. v3 is the negative waveform level.

SuggestedRemedy

change "v4" to "v3"

Response *Response Status* **W**

ACCEPT.

Cl **130** *SC* **130.7.1.7** *P* **144** *L* **31** # 316

Donahue, Curtis UNH-IOL

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

The enabling/disabling of equalization in this paragraph is confusing. First it says "with no equalization and a run of at least eight consecutive ones." then says "equalization may be disabled completely during this testing." Should be clear and consistant.

SuggestedRemedy

Remove the last sentence of this paragraph. This will make it clear that equalization needs to be disabled to accurately measure the transition time, and it would be consistant with 10GBASE-KR as well.

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.7.1.8** *P* **144** *L* **35** # 191

Hidaka, Yasuo Fujitsu Lab of America

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

Methodology of jitter measurement in Annex 48B.3 is old and not good.

SuggestedRemedy

Use the methodology of jitter measurement described in 92.8.3.8 which uses PRBS9.

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **130** *SC* **130.7.1.10** *P* **145** *L* **1** # 317

Donahue, Curtis UNH-IOL

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

130.7.1.10 Transmitter output waveform defines symbol periods and voltages for a square test pattern that is used for the "transmitter output waveform test". However, there aren't any electrical requirements involving these times and voltages.

SuggestedRemedy

Add electrical requirements involving the test pattern voltages, similar to those found in 72.7.1.11.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

In Table 130-4 add a new row above Common-mode voltage limits that says:
Pre-cursor ratio (Rpre) [column 1]
130.7.1.11 [column 2]
with a value of 1.25 +/- 0.05 [column 3]
[nothing in column 4]

See file
http://www.ieee802.org/3/cb/public/sep16/patra_3cb_01_0916_Tx_waveform.pdf

Also change text on page 145, line 25 to:
The transmitter output waveform test is based on the voltages v1
through v4, which shall be measured as shown in Figure 130–7 and described below. The Rpre requirements are shown in Table 130-4.

Cl **130** *SC* **130.7.1.11** *P* **145** *L* **23** # 241

Ewen, John GlobalFoundries

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

Subclause 130.7.1.11 appears incomplete. Voltages v1-v4 and ratio Rpre are defined but no values are specified for the PMD in Clause 130. PICS item TC21 however defines this as a mandatory feature which seems inconsistent.

SuggestedRemedy

I'm not sure of the original intent of this subclause. Perhaps the entire subclause should be moved to Annex 130A where the value for Rpre is defined.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Same as #317.

Cl **130** *SC* **130.7.1.11** *P* **145** *L* **25** # 252

Healey, Adam Broadcom Ltd.

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

A procedure for the measurement of v1, v2, v3, and v4 (and Rpre) is provided but no requirements on the values of v1, v2, v3, and v4 (and Rpre) are given.

SuggestedRemedy

Include the requirements or, if there are no requirements, remove the subclause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #317.

This was approved 6 Yes, 0 No, 0 Abstain.

Cl **130** *SC* **130.7.1.11** *P* **145** *L* **29** # 206

Lusted, Kent Intel

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

Figure 130-7 has a shadowing feature enabled that reduces readability.

SuggestedRemedy

Remove shadowing.

Response *Response Status* **W**

ACCEPT.
[Editor's note: this figure is an imported graphic that must be corrected outside of Framemaker.]

Cl **130** *SC* **130.7.1.11** *P* **145** *L* **52** # 208

Lusted, Kent Intel

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

For v1 and v3, the average voltage in the interval t1 to t2-T includes the shoulder rise time of the waveform. this artificially reduces the measured voltage from the true amplitude of the waveform at the midpoint.

SuggestedRemedy

consider defining a window in the flat portion of the waveform, away from the rise and falling edges, as the steady state voltage. see figure 72-12 for inspiration.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

See comments #192 and #193

[Editor's note: this figure is an imported graphic that must be corrected outside of Framemaker.]

Cl **130** *SC* **130.7.1.11** *P* **145** *L* **53** # 192

Hidaka, Yasuo Fujitsu Lab of America

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

v1 is defined as the average voltage in the interval t1 to t1-2T, but t1 is in the middle of the rising edge.

SuggestedRemedy

Define v1 as the average voltage in the interval t1+2T to t2-T.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Define v1 as the average voltage in the interval t1+2T to t2-2T.

Cl **130** *SC* **130.7.1.11** *P* **146** *L* **2** # 193

Hidaka, Yasuo Fujitsu Lab of America

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

v3 is defined as the average voltage in the interval t2 to t3-T, but t2 is in the middle of falling edge.

SuggestedRemedy

Define v3 as the average voltage in the interval t2+2T to t3-T.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Define v3 as the average voltage in the interval t2+2T to t3-2T.

Cl **130** *SC* **130.7.1.11** *P* **146** *L* **8** # 207

Lusted, Kent Intel

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

value for Rpre is not defined in specification.
the min and max value of Rpre is not defined in the specification.

SuggestedRemedy

Set a value for Rpre.
Define the min and max value of Rpre

Add relevant PICS entry.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #317 for first part

second part:
add new entry FS19 in
130.10.4.2 PMD functional specifications
to cover the transmitter waveform.
Add row FS19 with the following column content:
Feature: Pre-cursor ratio
Subclause: 130.7.1.11
Value/Comment: as specified in Table 130-4
Status: M
Support: Yes [ ]

Cl **130** *SC* **130.8** *P* **148** *L* **10** # 271

Healey, Adam Broadcom Ltd.

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

The interconnect characterstics are not defined in Annex 130B.

SuggestedRemedy

Change the reference to Annex 128C.

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.10.4.2** *P* **150** *L* **53** # 7

Laubach, Mark Broadcom Limited

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

The bottom horizontal line of the table is missing. It needs to be there.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.10.4.4** *P* **152** *L* **11** # 145

Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

Value/Comment column should read:
Less than or equal to 1200 mV for a 1010 pattern

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The voltage is a 'maximum'. Change text in Value column to read:

1200 mV for a 1010 pattern

Cl **130** *SC* **130.10.4.4** *P* **152** *L* **14** # 146
Smith, Daniel Seagate

Comment Type **TR** *Comment Status* **A**
change to be a "maximum"

SuggestedRemedy
Value/Comment column should read:
Less than or equal to 30 mV

Response *Response Status* **C**
ACCEPT.

Maximum transmitter differential
peak-to-peak voltage when
TX disabled should read in the Value column:

30 mV

Cl **130** *SC* **130.10.4.4** *P* **152** *L* **24** # 147
Smith, Daniel Seagate

Comment Type **TR** *Comment Status* **D**
change to be a "maximum"

SuggestedRemedy
Value/Comment column should read:
Less than or equal to 30 mV within 500 ns of tx_quiet

Proposed Response *Response Status* **Z**
REJECT.

This comment was WITHDRAWN by the commenter.

Cl **130A** *SC* *P* **201** *L* **6** # 318
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
Annex title is "5Gb/s Storage Enclosure Interface".

"5Gb/s" in 130A.4 title too.

SuggestedRemedy
Change "5Gb/s" to 5 Gb/s" in both titles.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A** *P* **201** *L* **6** # 70
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
"5Gb/s" should be "5 Gb/s" (there is always a space between a number and its unit.)

SuggestedRemedy
Change "5Gb/s" to "5 Gb/s" here and on page 218 lines 2 and 36

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.1** *P* **201** *L* **13** # 261
Healey, Adam Broadcom Ltd.

Comment Type **TR** *Comment Status* **A**
Since this is an Annex to Clause 130, it seems reasonable to assume that transmitter and receivers that satisfy the Clause 130 requirements are suitable for this application. If this is the case, then it seems TP0D-H and TP0H-D should be equivalent to TP1 in Clause 128, and TP5D-H and TP5H-D should be equivalent to to TP4 in Clause 130. If so, then it seems that channel between TP0D-H and TP5H-D (or TP0H-D and TP5D-H) is simply a specific partitioning of the generic channel described in Annex 128C. If all of this is correct, then it seems that the text and/or test point definitions should be modified to make this clear. If it is not correct, then the relationship between this interface and clause it is associated with is unclear. Is this Annex defining a completely different PMD?

SuggestedRemedy
Clarify the relationship between a 5GBASE-KR PMD and the 5GSEI.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Same resolution as comment #255 but for Annex 130A.

Cl **130A** *SC* **130A.1** *P* **202** *L* **3** # 87
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Figure 130A-2 reference is incorrect.

SuggestedRemedy
Change 130A-2 to 130A-3.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.1** *P* **202** *L* **7** # 262

Healey, Adam Broadcom Ltd.

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

In Figure 130A-1, the test point adjacent to the PMD transmit function is TP0 but here it appears to be TP1. Which is correct?

SuggestedRemedy

Include the TX PCB before TP0 or change the test point to TP1.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Fix figure 130A-1 to show the 2nd reference to TP1 as TP0 and elongate the path to make it look differrent.

See file calbone_3cb_01_0916.pdf.

[Editor's note: file located at http://www.ieee802.org/3/cb/public/sep16/index.html]

Cl **130A** *SC* **130A.1** *P* **202** *L* **14** # 263

Healey, Adam Broadcom Ltd.

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

Why is the loss from TP1D-H to the connector 1.2 dB in one part of the figure and 2 dB in another part of the figure. What has changed? Similarly for the TP1 to TP5 insertion loss.

SuggestedRemedy

Clarify the difference between the diagrams in Figure 130A-2.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Fix figure 130A-2 to show the 2nd reference to TP1 as TP0 and elongate the path to make it look differrent.

Refer to:
calbone_3cb_01_0916.pdf posted on Public page for Sept Interim.

[Editor's note: file located at http://www.ieee802.org/3/cb/public/sep16/index.html]

Cl **130A** *SC* **130A.1.1** *P* **203** *L* **29** # 149

Smith, Daniel Seagate

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

change to be a "maximum"

SuggestedRemedy

Value/Comment column should read:
The bit error ratio (BER) shall be less than or equal to 10-12 with any errors...

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **130A** *SC* **130A.2** *P* **204** *L* **10** # 10

Laubach, Mark Broadcom Limited

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

Line 10 and 25. Text is running into lines. Maintain slightly larger visual separation to avoid collision.

Almost same for Figure 130A–5 on Page 205.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **130A** *SC* **130A.2** *P* **205** *L* **20** # 265

Healey, Adam Broadcom Ltd.

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

In the second part of the figure, it seems the test point at the PMD receiver function should be TP5H-D. the test point at the connection interface should be TP4H-D, the "Tx PCB" should be "Rx PCB", and the AC coupling capacitors shown between the TP4 and TP5.

SuggestedRemedy

Modify the figure per the comment.

Response *Response Status* **C**

ACCEPT.

See file http://www.ieee802.org/3/cb/public/sep16/calbone_3cb_01_0916.pdf

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **1** # 30
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
Subclause reference column is empty

SuggestedRemedy
Please insert references in Subclause reference column

Response *Response Status* **C**
ACCEPT.

See file
http://www.ieee802.org/3/cb/public/nov16/smith_3cb_02_1116_comment_30.pdf

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **7** # 89
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy
Widen Units column so the whole word fits into one line.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **9** # 234
Ewen, John GlobalFoundries

Comment Type **E** *Comment Status* **A**
Table 130A-1 is missing subclause references

SuggestedRemedy
Insert appropriate references

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

See file
http://www.ieee802.org/3/cb/public/nov16/smith_3cb_02_1116_comment_30.pdf

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **9** # 319
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
Remove the striked out text "per lane (range)".

SuggestedRemedy
See comment.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.
[Editor's note: duplicate of #23.]

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **9** # 266
Healey, Adam Broadcom Ltd.

Comment Type **ER** *Comment Status* **A**
The "Subclause reference" column of Table 130A-1 is blank. In the parameter column, the phrase "per lane (range)" in the signaling rate row is struck out for no apparent reason.

SuggestedRemedy
Fill in the missing column and correct the formatting error.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Same as comment #63.

Fill in blank columns with information from:
http://www.ieee802.org/3/cb/public/nov16/smith_3cb_02_1116_comment_30.pdf

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **9** # 90
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.1 to signaling rate Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **9** # 88
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
Text is crossed out in the signaling rate parameter

SuggestedRemedy
Remove the "per lane (range)" text that is crossed out.

Response *Response Status* **C**
ACCEPT.
[Editor's note: duplicate of #23.]

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **10** # 91
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.2 to DC CMV Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **12** # 92
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.2 to AC CMV Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **14** # 93
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.2 to pk-pk transmitter disabled Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **15** # 94
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.2 to pk-pk transmitter enabled Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **17** # 95
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.3 to return loss Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **20** # 96
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.4.2 to vf(max) Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **20** # 101
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The mV units are slightly off of the Values

SuggestedRemedy
Move the mV's down a bit

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **21** # 97
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.4.2 to vf(min) Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **21** # 98
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.4.2 linear fit pulse peak (min) Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **24** # 99
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.6 to all Jitter Subclause references

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **206** *L* **28** # 100
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
There is no subclause reference

SuggestedRemedy
Add 130A.3.1.7 to txsndr Subclause reference

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1.1** *P* **206** *L* **37** # 31
Hajduczenia, Marek Charter Communicatio

Comment Type **E** *Comment Status* **A**
Odd dash over "93" in 192.93 ps statement

SuggestedRemedy
Make sure dash is removed

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1.1** *P* **206** *L* **37** # 130
Smith, Daniel Seagate

Comment Type **ER** *Comment Status* **A**
Overbar on the decimal 193.93

SuggestedRemedy
remove the overbar

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.1.4.1** *P* **208** *L* **48** # 267
Healey, Adam Broadcom Ltd.

Comment Type **TR** *Comment Status* **A**
PRBS13Q is a PAM4 test pattern and seems to be inappropriate for this interface. Furthermore, 94.3.12.5.2 pertains to the measurement of PAM4 signals. Note the similar issue with 130A.3.3.1.

SuggestedRemedy
Change the reference to 92.8.3.5 or a similar NRZ-based measurement procedure. Note that 92.8.3.5 specified the use of PRBS9 so not expection for the test pattern would likely be required in this case.

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.

Replace the paragraph with the text below:
The linear fit pulse response is characterized using the procedure described in 92.8.3.5.1 with the exception that the measurement is performed at TP4H-D rather than TP2 and Np =8.

Cl **130A** *SC* **130A.3.1.4.1** *P* **208** *L* **48** # 197

Hidaka, Yasuo Fujitsu Lab of America

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

The linear pulse fitting procedure in 94.3.12.5.2 is for PAM4 signal, and PRBS13Q is a PAM4 test pattern.

SuggestedRemedy

Use the linear pulse fitting procedure for NRZ that is described in 92.8.3.5.1 and use PRBS9 test pattern.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change is similar to comment #267.

Cl **130A** *SC* **130A.3.1.4.1** *P* **208** *L* **50** # 239

Ewen, John GlobalFoundries

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

Why is a PAM4 pattern used for the linear fit pulse response when normal operation uses NRZ? Also the reference to 120.5.10.2.3 appears incorrect.

SuggestedRemedy

Use a PRBS9 test pattern for the linear pulse fit as specified in 120.5.11.1.2

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #267.

Cl **130A** *SC* **130A.3.1.4.2** *P* **209** *L* **1** # 102

Calbone, Anthony Seagate

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

The is not a period after the 1st sentence.

SuggestedRemedy

Add a period after 130A.3.1.4.1.

Response *Response Status* **C**

ACCEPT.

Cl **130A** *SC* **130A.3.1.4.2** *P* **209** *L* **2** # 268

Healey, Adam Broadcom Ltd.

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

130A.3.1 already states that "A 5GSEI host input shall meet the specifications defined in Table 130A–1 if measured at the appropriate test point." and Table 130A-1 includes the parameters defined in this subclause. It is not necessary to state the requirements again.

SuggestedRemedy

Remove the last two sentences from this subclause. Note similar issues in 130A.3.1.6, 130A.3.1.7, 130A.3.3.2, and 130A.3.3.3.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

[Editor's note: this also applies too 128A.3.1.4.2, 128A.3.1.6, 128A.3.1.7, 128A.3.3.2, and 128A.3.3.3.

See file http://www.ieee802.org/3/cb/public/nov16/mcmillan_3cb_01_1116_Annexes_128A&130AMarkedUp.pdf

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Cl **130A** *SC* **130A.3.1.6** *P* **209** *L* **16** # 275

Healey, Adam Broadcom Ltd.

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

If the maximum permitted deterministic jitter is 0.12 UI and the maximum permitted random jitter is 0.15 UI, how could a compliant implementation exhibit jitter in excess of 0.27 UI? The specification seems to set the maximum jitter to 0.30 UI despite this.

SuggestedRemedy

Check the jitter math. Note that DCD is considered a component of deterministic jitter as stated in 128A.3.1.6.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In Table 130A-1:
Change maximum Tj to 0.27 UI.

See file http://www.ieee802.org/3/cb/public/sep16/patra_3cb_01_0916_Jitter_number.pdf

Change "Duty Cycle Distortion" line by indenting it and changing text to:
Duty Cycle Distortion (included in Dj)

Cl **130A** *SC* **130A.3.2** *P* **209** *L* **40** # 103
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy
Widen Units column so the whole word fits into one line.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.2.2** *P* **209** *L* **53** # 11
Laubach, Mark Broadcom Limited

Comment Type **E** *Comment Status* **A**
Orphan subtitle. Keep with next few lines.

SuggestedRemedy
As per comment.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.2.2** *P* **211** *L* **13** # 12
Laubach, Mark Broadcom Limited

Comment Type **E** *Comment Status* **A**
Right side of box is missing. Fix.

SuggestedRemedy
As per comment.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.2.3** *P* **211** *L* **35** # 104
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The reference to Table 130A-10

SuggestedRemedy
Change Table 130A-10 to Figure 130A-10

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.3** *P* **213** *L* **9** # 106
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy
Widen Units column so the whole word fits into one line.

Response *Response Status* **C**
ACCEPT.

Cl **130A** *SC* **130A.3.3** *P* **213** *L* **30** # 105
Calbone, Anthony Seagate

Comment Type **E** *Comment Status* **A**
The Subclause reference is incorrect

SuggestedRemedy
Change the txsndr reference to 130A.3.3.3

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.
[Editor's note: where is 'txsndr' in the table?
Signal-to-noise-and-distortion ratio (min)]

Cl **130A** *SC* **130A.3.3.1** *P* **213** *L* **24** # 242
Ewen, John GlobalFoundries

Comment Type **E** *Comment Status* **A**
Table 130A-6 The subclause reference for Pre-cursor ratio is incorrect.

SuggestedRemedy
Refer to 130.7.1.11 or update 130A.3.3.1 to define pre-cursor ratio.

Response *Response Status* **C**
ACCEPT.

Reference changed to 130.7.1.11

Cl **130A** *SC* **130A.3.3.1** *P* **213** *L* **39** # 198

Hidaka, Yasuo Fujitsu Lab of America

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

The linear pulse fitting procedure in 94.3.12.5.2 is for PAM4 signal, and PRBS13Q is a PAM4 test pattern.

SuggestedRemedy

Use the linear pulse fitting procedure for NRZ that is described in 92.8.3.5.1 and use PRBS9 test pattern.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change is similar to comment #267.

Cl **130A** *SC* **130A.3.3.1** *P* **213** *L* **41** # 240

Ewen, John GlobalFoundries

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

Why is a PAM4 pattern used for the linear fit pulse response when normal operation uses NRZ? Also the reference to 120.5.10.2.3 appears incorrect.

SuggestedRemedy

Use a PRBS9 test pattern for the linear pulse fit as specified in 120.5.11.1.2

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #267.

Cl **130A** *SC* **130A.3.3.2** *P* **213** *L* **46** # 107

Calbone, Anthony Seagate

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

There is an extra parenthesis around p(k)

SuggestedRemedy

Remove the extra parathesis. Change p(k)) to p(k).

Response *Response Status* **C**

ACCEPT.

Cl **130A** *SC* **130A.3.4** *P* **214** *L* **10** # 108

Calbone, Anthony Seagate

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

The Units column is not wide enough for the title Units, so the "s" is on a second line.

SuggestedRemedy

Widen Units column so the whole word fits into one line.

Response *Response Status* **C**

ACCEPT.

Cl **130A** *SC* **130A.3.4** *P* **214** *L* **10** # 13

Laubach, Mark Broadcom Limited

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

Adjust column size to avoid breaking "s" of "Units" onto separate line.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPT.

Cl **130A** *SC* **130A.4.4.3** *P* **220** *L* **19** # 68

Anslow, Pete Ciena

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

The IEEE style manual says "A multiplication sign (×), not the letter “x”" should be used for a multiply sign.

SuggestedRemedy

Replace the "x" with a multiply sign (Ctrl-q 0).
Check the draft for other instances.

Response *Response Status* **C**

ACCEPT.

Cl **130B** *SC* **130B** *P* **221** *L* **5** # 119
D'Ambrosia, John Futurewei, Subsidiary

Comment Type **ER** *Comment Status* **A**
Annex 130B is primarily a duplication of Annex 69B. Such duplication should be avoided.

SuggestedRemedy
There are two options
1.delete annex 130B - modify annex 69B to add in specific requirements related to 5GBASE-KR
2. Delete redundant text in annex 12830b, and replace in each instance with pointer to the original text in Annex 69B

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

Use solution #1.
Delete annex 130B, and place 5G information into 69A.

Cl **130B** *SC* **130B.1** *P* **221** *L* **17** # 320
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
"Channel".

SuggestedRemedy
Change to "channel" (lowercase). Also in 128B.1.

Response *Response Status* **C**
ACCEPT.

Cl **130B** *SC* **130B.2.2** *P* **222** *L* **35** # 321
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
"ILTC" should be "IL_TC" where "_" represents subscript text.

Also in 128B.2.2.

SuggestedRemedy
Change "ILTC" to IL_TC" in both locations.

Response *Response Status* **C**
ACCEPT.

Cl **130B** *SC* **130B.3** *P* **223** *L* **38** # 322
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
"2.5GBASE-KX" should be "5GBASE-KR".

SuggestedRemedy
Change to "5GBASE-KR"

Response *Response Status* **C**
ACCEPT.

Cl **130B** *SC* **130B.3** *P* **223** *L* **43** # 323
Donahue, Curtis UNH-IOL

Comment Type **E** *Comment Status* **A**
Looks like this sentence is missing a subclause reference, "in for 5GBASE-KR".

SuggestedRemedy
Change to "in 130.7.2.1 for 5GBASE-KR."

Response *Response Status* **C**
ACCEPT.

Cl **344** *SC* **127.2.6.2.2** *P* **82** *L* **2** # 344
Law, David HPE

Comment Type **T** *Comment Status* **A**
In Figure 127–5 'PCS transmit ordered set state diagram' suggest that 'tx_en=0 * tx_er=0' should read 'tp_en=0 * tp_er=0' on the transition from the state TX_TEST_XMIT to XMIT_DATA.

SuggestedRemedy
See comment.

Response *Response Status* **C**
ACCEPT.