Cl **00** *SC* **0** *P* *L* # 119

Marris, Arthur — Cadence Design Syst

Comment Type **TR** *Comment Status* **D** *25G*

Motion 32 at the 802.3 March plenary meeting in Berlin approved modifying the P802.3bq objectives to include:
"Define a single 25 Gb/s PHY supporting operation on the link segment"

Therefore the 802.3bq draft is not fit to proceed to sponsor group ballot until the 25GBASE-T PHY is included.

SuggestedRemedy

Include support for the 25GBASE-T PHY

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Motion to approve PAR changes was inadvertently missed at the March Plenary. If PAR changes are approved, 25GBASE-T PHY will be added, if they are not, the objective will be out of scope of the PAR and be deleted.

Cl **00** *SC* **0** *P* **20** *L* **20** # 75

Zimmerman, George — CME Consulting, Inc.

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

Editing instruction should not re-number clauses or definitions when inserted as an "a" heading number
"Insert definition and re-number remaining definitions." (1.4.72a P20 L20, 1.4.278a P20, L25)
"Insert new clause after 45.2.1.12.9 and re-number remaining clauses." (45.2.1.12.9a P34 L4, 45.2.3.7.5a P38 L38, 45.2.3.9.4a P39 L16, 45.2.7.10.41 P45 L3, 45.2.7.11.7a P47 L13, 45.2.7.13.4a P48 L16)

SuggestedRemedy

delete "and re-number remaining definitions" (2 instances, 1.4.72a P20 L20, 1.4.278a P20, L25)
delete "and re-number remaining clauses" (6 instances,45.2.1.12.9a P34 L4, 45.2.3.7.5a P38 L38, 45.2.3.9.4a P39 L16, 45.2.7.10.41 P45 L3, 45.2.7.11.7a P47 L13, 45.2.7.13.4a P48 L1)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of comment 34)

Cl **00** *SC* **0** *P* **20** *L* **20** # 34

Anslow, Pete — Ciena

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

Established 802.3 practice is that amendments do not re-number the sublauses in the base document. This is particularly important for sections like 1.4 and Clause 45 which are modified by multiple amendments simultaneously. Any re-numbering that is required is then performed by the next revision project (such as the current 802.3bx).
Also, there were multiple comments against P802.3bq D2.0 which proposed to remove the "re-number" text and were ACCEPT. Examples are:
#158 45.2.1.12.9a
#170 45.2.3.7.5a
#173 45.2.3.9.4a
#177 45.2.7.10.4a and 45.2.7.10.4b
#182 45.2.7.11.7a
#187 45.2.7.13.4a

However, these comments were not implemented correctly and the "re-number" text remains in the draft despite the correct use of "a" subclause numbers to avoid the need for this.

SuggestedRemedy

Remove re-numbering and implement the comments noted above.
For 1.4.72a change the editing instruction to: "Insert the 40GBASE-T definition into the list after 1.4.72 40GBASE-SR4 as follows:"
For 1.4.278a change the editing instruction to: "Insert the MultiGBASE-T definition into the list after 1.4.278 multiport device as follows:"
For 45.2.1.12.9a change the editing instruction to: "Insert 45.2.1.12.9a after 45.2.1.12.9 as follows:"
For 45.2.3.7.5a change the editing instruction to: "Insert 45.2.3.7.5a after 45.2.3.7.5 as follows:"
For 45.2.3.9.4a change the editing instruction to: "Insert 45.2.3.9.4a after 45.2.3.9.4 as follows:"
For 45.2.7.10.4a and 45.2.7.10.4b change the editing instruction to: "Insert 45.2.7.10.4a, 45.2.7.10.4b, and 45.2.7.10.4c after 45.2.7.10.4 as follows:"
For 45.2.7.11.7a change the editing instruction to: "Insert 45.2.7.11.7a, and 45.2.7.11.7b after 45.2.7.11.7 as follows:"
For 45.2.7.13.4a change the editing instruction to: "Insert 45.2.7.13.4a after 45.2.7.13.4 as follows:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of comment 75)

Cl **00** *SC* **0** *P* **59** *L* **13** # 35

Anslow, Pete — Ciena

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

Comment i-31 against the revision project 802.3bx D3.0 has removed the text "CSMA/CD" from clauses for 10G and above since they are all full duplex.
The suggested remedy follows the changes made in response to comment i-31

SuggestedRemedy

In Figure 80-1 change: "LAN CSMA/CD AYERS" on three levels (note missing "L") to: "ETHERNET LAYERS" on two levels.
In Figure 81-1 and Figure 113-1 change: "LAN CSMA/CD LAYERS" on three levels to: "ETHERNET LAYERS" on two levels.
In the titles of Figure 81-1 and Figure 113-1, change: "the IEEE 802.3 CSMA/CD LAN model" to "the IEEE 802.3 Ethernet model"
In 113.1.1 change: "IEEE 802.3 CSMA/CD LAN model" to "the IEEE 802.3 Ethernet model" and also change "the IEEE 802.3 (CSMA/CD) MAC" to "the IEEE 802.3 MAC"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.4** *P* **20** *L* **30** # 42

HESS, DAVE — CORD DATA

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

Include a new definition for "Category 8" balanced copper cabling similar to and consistent with the other balanced copper cabling types.

SuggestedRemedy

Insert the following new definitions into the list, in alphanumerical order:

1.4.x Category 8 balanced cabling: Balanced 100 Ù cables and associated connecting hardware whose transmission characteristics are specified up to 2,000 MHz (i.e., cabling components meet the performance specified in ANSI/TIA-568-C.2-1). In addition to the requirements outlined in ANSI/TIA-568-C.2-1, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, Clause 55, and Clause 113 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, 10GBASE-T, and 40GBASE-T.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Category 8 balanced cabling: Balanced 100 Ω cables and associated connecting hardware whose transmission characteristics are specified up to 2,000 MHz (i.e., cabling components that meet the Category 8.1 or Category 8.2 balanced cabling specified in ISO/IEC 11801-1 Edition 3 and Category 8.1 and Category 8.2 specified in ANSI/TIA-568-C.2-1. ISO/IEC 11801-1 Edition 3 Category 8.1 and Category 8.2 are used in Class I and Class II channels respectively. In addition to the requirements outlined in ISO/IEC 11801-1 Edition 3 and 8.2 ANSI/TIA-568-C.2-1, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, Clause 55, and Clause 113 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, 10GBASE-T, and 40GBASE-T.

For committee discussion

Cl **01** *SC* **1.4** *P* **20** *L* **30** # 41

HESS, DAVE CORD DATA

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

Include a new definition for "Class II" balanced copper cabling, similar to and consistent with the other balanced copper cabling types.

SuggestedRemedy

Insert the following new definitions into the list, in alphanumerical order:

1.4.x Class II / Category 8.2 balanced cabling: Balanced 100 Ù cables and associated connecting hardware whose transmission characteristics are specified up to 2,000 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801-1 Edition 3). In addition to the requirements outlined in ISO/IEC 11801-1 Edition 3, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, Clause 55, and Clause 113 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, 10GBASE-T, and 40GBASE-T.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See comment#42

Cl **01** *SC* **1.4** *P* **20** *L* **30** # 40

HESS, DAVE CORD DATA

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

Include a new definition for "Class I" balanced copper cabling, similar to and consistent with the other balanced copper cabling types.

SuggestedRemedy

Insert the following new definitions into the list, in alphanumerical order:

1.4.x Class I / Category 8.1 balanced cabling: Balanced 100 Ù cables and associated connecting hardware whose transmission characteristics are specified up to 2,000 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801-1 Edition 3). In addition to the requirements outlined in ISO/IEC 11801-1 Edition 3, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, Clause 55, and Clause 113 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, 10GBASE-T, and 40GBASE-T.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See comment#42

Cl **01** *SC* **1.4.278a** *P* **20** *L* **27** # 43

Hajduczenia, Marek Bright House Network

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

"at speeds in excess of 1000Mbps" - wrong speed format

SuggestedRemedy

Change to "at speeds in excess of 1000 Mb/s"

Also, replace "Clause 55" with "see IEEE Std 802.3, Clause 55" and "Clause 113" with "see IEEE Std 802.3, Clause 113"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 36)

Cl **01** *SC* **1.4.278a** *P* **20** *L* **27** # 77

Zimmerman, George CME Consulting, Inc.

Comment Type **E** *Comment Status* **D** *PMA/PMD*

The MultiGBASE-T PHYs do not have PMD sublayers.

SuggestedRemedy

Change "Ethernet PCS/PMA/PMDs" to "Ethernet PHYs"
Alternatively "Ethernet PCS/PMAs"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change to "Ethernet PCS/PMAs"

Cl **01** *SC* **1.4.278a** *P* **20** *L* **27** # 36

Anslow, Pete Ciena

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

In the definition for MultiGBASE-T:
"1000Mbps" should be "1000 Mb/s"
"Clause 55" should be "IEEE Std 802.3, Clause 55" and "Clause 55 should be a cross-reference.
"Clause 113" should be "IEEE Std 802.3, Clause 113" and "Clause 113 should be a cross-reference.

SuggestedRemedy

Change: "1000Mbps" to "1000 Mb/s"
Change: "Clause 55" to "IEEE Std 802.3, Clause 55" and make "Clause 55" a cross-reference.
Change: "Clause 113" to "IEEE Std 802.3, Clause 113" and make "Clause 113" a cross-reference.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 43)

Cl **01** *SC* **1.4.72a** *P* **20** *L* **23** # 76

Zimmerman, George — CME Consulting, Inc.

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

References to category 8, Class I and Class II are incomplete and imprecise.

SuggestedRemedy

Change "category 8, Class I, or Class II balanced copper cabling." to
"TIA category 8, ISO/IEC Class I, or ISO/IEC Class II balanced copper cabling."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change "category 8, Class I, or Class II balanced copper cabling." to
"ANSI/TIA Category 8, ISO/IEC Class I, or ISO/IEC Class II balanced copper cabling."

Cl **01** *SC* **1.5** *P* **20** *L* **32** # 78

Zimmerman, George — CME Consulting, Inc.

Comment Type **E** *Comment Status* **D** *Editorial - Not EZ*

Editorial note that 1.5 is a placeholder is no longer needed since there is now an abbreviation in the section.

SuggestedRemedy

Delete editor's note. (Lines 32-36)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **01** *SC* **1.5** *P* **20** *L* **37** # 79

Zimmerman, George — CME Consulting, Inc.

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

Editing instruction references definitions, should be abbreviations in Clause 1.5

SuggestedRemedy

Change "Insert the following new definitions into the definitions list, in alphanumeric order:" to "Insert the following new abbreviations into the abbreviations list, in alphanumeric order:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113** *P* **96** *L* **5** # 90

Zimmerman, George — CME Consulting, Inc.

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

Extraneous period after colon, and figure comes mid-sentence separating equations from descriptive text:
"This implements the scrambler polynomial:8." (figure comes here, then equation 113-1)

SuggestedRemedy

delete . after colon & footnote. Move Figure 113-11 so it does not disrupt sentence flow.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.1** *P* **65** *L* # 9

Brown, Matt — APM

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

Subclause 113.1 does not define all of the mandatory and optional sublayers required for a complete physical layer as is done for all 10GBASE-R, 40GBASE-R, and 100GBASE-R PHYs. An example is Table 84-1 for 40GBASE-KR4. Such a table is helpful to identify the related layers and interfaces that are relevant to 40GBASE-T but not defined in the Clause 113 such as the XLGMII (81), RS (81), XLAUI (83A, optional), 40GBASE-R PCS (82, optional, but req'd for XLAUI) and 40GBASE-R PMA (83, optional, but req'd for XLAUI).

SuggestedRemedy

Add a table "Physical Layer clauses associated with the 40GBASE-T PCS/PMA" list the "associated clauses" and indicate "optional" or "mandatory" for each.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Such a table, which popular for optical phys which may have functions instantiated in separate chips or ip blocks, have generally not been used in base-t phys. The information necessary already exists in the 40G overview clauses (e.g., Table 80-2) and including it in clause 113 would result in redundancy and synchronous maintenance.

Cl **113** *SC* **113.1** *P* **65** *L* **9** # 37

Anslow, Pete — Ciena

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

"cabling systebbms" should be "cabling systems"

SuggestedRemedy

Change "cabling systebbms" to "cabling systems"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.1.1** *P* **66** *L* **1** # 38

Anslow, Pete Ciena

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

"Clause 81" should be a cross-reference (line 1)
"Annex 83B" should have character tag "External" applied (line 2)
"Clause 82" should have character tag "External" applied (line 3)

SuggestedRemedy

Make "Clause 81" a cross-reference (line 1)
Apply character tag "External" to "Annex 83B" (line 2)
Apply character tag "External" to "Clause 82" (line 3)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.1.1** *P* **66** *L* **4** # 85

Zimmerman, George CME Consulting, Inc.

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

Figure 113-1 references CSMA/CD, align with IEEE Std. 802.3bx D3p1, Replace "LAN CSMA/CD" with "ETHERNET" in upper part of figure, and in figure title on line 30.

SuggestedRemedy

Replace "LAN CSMA/CD LAYERS" with "ETHERNET LAYERS" in Figure 113-1 (line 4)
Replace "CSMA/CD LAN" with "Ethernet" in figure title on line 30

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. Dup with 35

Cl **113** *SC* **113.1.2** *P* **69** *L* **8** # 39

Anslow, Pete Ciena

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

Comment i-85 against the revision project 802.3bx D3.0 has changed the expansion of XLGMII from "40 Gigabit Media Independent Interface" to "40 Gb/s Media Independent Interface"

SuggestedRemedy

In Figure 113-3, Figure 113-4, and Figure 113-5 change "FORTY GIGABIT MEDIA" to "40 Gb/s MEDIA"
In 113.1.2.1 (page 70, line3) change "...a Forty Gigabit Media Independent..." to "...a 40 Gb/s Media Independent..."
In 113.2 a) change "Forty Gigabit Media Independent Interface" to "40 Gb/s Media Independent Interface"
In 113.3.1 change "40 Gigabit Media Independent Interface" to "40 Gb/s Media Independent Interface"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.12** *P* **181** *L* **19** # 17

Anslow, Pete Ciena

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

The PICS proforma should start at the top of a new page.
The text in 113.12 and the tables in 113.12.1.1 and 113.12.1.2 should be based on those in the 802.3 template.

SuggestedRemedy

In the paragraph designer, set the heading for 113.12 to Start: Top of Page as per the 802.3 template.
Change text in 113.12 and the tables in 113.12.1.1 and 113.12.1.2 to be based on those in the 802.3 template.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.2.2.11** *P* **91** *L* **42** # 89

Zimmerman, George — CME Consulting, Inc.

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

For 40Gb/s start characters can only occur at the start of a 65B block: "Block type field values implicitly encode an /S/ as the fifth or first character of the block."
Similarly for ordered sets on page 92, lines 6 & 7 (113.3.2.2.13)
"Block type field values implicitly encode an /O/ as the first or fifth character of the block."

Note this will need to be augmented to differentiate 25G and 40G operation if 25GBASE-T is added

SuggestedRemedy

Add "for 40 Gb/s transmission" and delete "fifth or" so it reads, "For 40 Gb/s transmission, block type field values implicitly encode an /S/ as the first character of the block."

and similarly, in 113.3.2.2.13 (P92 L6-7)
"For 40 Gb/s transmission, block type field values implicitly encode an /O/ as the first character of the block."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.2.2.16** *P* **92** *L* **52** # 2

Slavick, Jeff — Avago Technologies

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

The transcoding process causes all 64b blocks to be able to land in all 8 locations of the transcoded word. This adds complexitity that isn't necessary.

SuggestedRemedy

Change the transcoder to move the first Control block to position 0 and bump all data blocks from position 0 to the first Control block down by 1 value. This means location 0 must have an 8:1 mux, but the other 7 only need a 2:1 (previous or normal).

ie.
0 - 0001 xxxx C0-C7 Control (orignial location 4)
1 - Data block (original location 0)
2 - Data block (original location 1)
3 - Data block (original location 2)
4 - Data block (original location 3)
5 - Control block
6 - Control block
7 - Data block

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Commenter does not provide sufficient detailed remedy for text

Cl **113** *SC* **113.3.2.2.16** *P* **94** *L* **1** # 11

Anslow, Pete — Ciena

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

In the title of Table 113-3, "Translation" should be "translation"

SuggestedRemedy

Change "Translation" to "translation"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.2.2.16** *P* **95** *L* **3** # 3

Slavick, Jeff — Avago Technologies

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

In Figure 113-10 Example one lists the first row as Control block, has a header for 2nd control block but lists D1-D7 in the data section of the block.

SuggestedRemedy

Convert the 2nd row of Example 1 in Figure 113-10 from from D1-D7 to C0-C7

Proposed Response *Response Status* **W**

PROPOSED REJECT.
The second row correctly contains data blocks D1 through D7 according to the encoding rules described.
Example 1 has 2 control codes, 0x1E and 0x78. The first control code 0x1E is, according to table 113-9 is followed by 8 7-bit C-code control characters (C0 through C7) which are depicted in Example 1's first row in Figure 113-10. The second control code 0x78 is a start-of-frame delimiter followed by 7 data bytes, D1 through D7, also shown correctly in Example 1's 2nd row in Figure 113-10.

Cl **113** *SC* **113.3.2.2.19** *P* **97** *L* **3** # 91

Zimmerman, George — CME Consulting, Inc.

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

IEEE style manual - spell out isolated numbers less than ten.

SuggestedRemedy

replace "2 random fill bits" with "two random fill bits"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.2.2.8** *P* **90** *L* **34** # 4

Slavick, Jeff — Avago Technologies

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

Figure 113-9 shows the list of 64b/65b Block formats but the note below it then says ignore some of these they're not right.

SuggestedRemedy

Remove the illegal rows from Figure 113-9 and update control code 0x4B to have Z characters instead of C.
Remove the NOTE listing the exceptions that are now part of the table.

If Clause 113 adds 25G with 32b algined block encodings then create a new Figure to show the valid block formats for the 25G. One Figure for 40g and another for 25g.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.2.2.8** *P* **90** *L* **34** # 10

Anslow, Pete — Ciena

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

The note under Figure 113-9 was the subject of comment #126 against D2.0 which was "ACCEPT". However, the Suggested Remedy was not implemented correctly.

SuggestedRemedy

Change "Note" to "NOTE"
Change:
"For 40Gbps Transmission, 64 bit alignment ..." to:
"For 40 Gb/s transmission, 64-bit alignment ..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. See comment 4, note to be deleted

Cl **113** *SC* **113.3.4** *P* **105** *L* **1** # 86

Zimmerman, George — CME Consulting, Inc.

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

Frame version of Figure 113-14 is now available, see 802.3bz D0p1, without strikeout.

SuggestedRemedy

Replace Figure 113-14 with frame version from 802.3bz D0p1 without strikeout marks.
Delete editors note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.6.2.1** *P* **109** *L* **23** # 92

Zimmerman, George CME Consulting, Inc.

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

40 Gb/s ordered sets are constrained to by aligned with the 8 byte boundary in XLGMII, hence there can only be one local fault or link interruption ordered set in an XLGMII word, not two as stated:
(Line 23, LBLOCK_R) "72 bit vector to be sent to the XLGMII interface containing two Local Fault ordered sets."
(Line 26, LBLOCK_T) "65 bit vector to be sent to the 512B/513B transcoder and block-LDPC framer containing two Local Fault ordered sets."
(Line 40, UBLOCK_R) "72 bit vector to be sent to the XLGMII containing two Link Interruption ordered sets."

Note - these will need to be augmented if 25G is added to have both usages (two and one set).

SuggestedRemedy

change "two" to "a" in lines 23, 26 and 40, and "sets" to "set" to read as:
"containing a Local Fault ordered set" (L 23 & 26), and "containing a Link Interruption ordered set" (L40).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.6.2.2** *P* **109** *L* **53** # 87

Zimmerman, George CME Consulting, Inc.

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

description of lfer_timer interval of 125usec inconsistent with definition of lfer_timer on page 111 line 45 (125/4 usec)

SuggestedRemedy

Delete "(nominally 125 us for 40GBASE-T, indicating a bit error ratio > 10^-4)"
(so that lfer_timer definition on page 111 becomes the single, controlling reference).
also, delete descriptive reference on 113.3.7.2 P 113, L34 "(nominally 125/4 ìs for 40GBASET)"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.6.2.4** *P* **112** *L* **37** # 93

Zimmerman, George CME Consulting, Inc.

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

Text incorrectly describes valid 10G control codes, not 40G, and includes invalid 0x2D, 0x55, 0x33, and 0x66 invalid 40G block types, and invalid 40G use of 0x4B block code with control characters:
line 34:
"C; The vector contains a data/ctrl header of 1 and one of the following:
a) A block type field of 0x1E and eight valid control characters other than /E/ and /LI/;
b) A block type field of 0x2D or 0x4B, a valid O code, and four valid control characters;
c) A block type field of 0x55 and two valid O codes.
S; The vector contains a data/ctrl header of 1 and one of the following:
a) A block type field of 0x33 and four valid control characters;
b) A block type field of 0x66 and a valid O code;
c) A block type field of 0x78."

Note - these will have to be added back in if 25GBASE-T is added, but need language separating out their 40G use from their 25G use.

SuggestedRemedy

Under "C" (line 37)
Replace item b - "b) A block type field of 0x2D or 0x4B, a valid O code, and four valid control characters;" with
"b) A block type field of 0x4B, a valid O code, and zeros, as shown in Figure 82-4."
delete line 39, item "c" (block type field of 0x55...)

Under "S" (line 40):
delete items (a) & (b) (lines 40 & 41) and relabel (c) as (a) to read:
"S; The vector contains a data/ctrl header of 1 and one of the following:
a) A block type field of 0x78."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.6.2.4** *P* **113** *L* **19** # 80

Zimmerman, George — CME Consulting, Inc.

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

text incorrectly describes valid 10G control codes, not 40G, and includes invalid two ordered set block types, and invalid 40G use of 0x4B block code (one ordered set with 4 control characters), and describes S as being able to occur on fifth position (invalid block types 0x33, 0x66):
"C; The vector contains one of the following:
a) eight valid control characters other than /O/, /S/, /T/, /E/, and /LI/;
b) one valid ordered set and four valid control characters other than /O/, /S/ and /T/;
c) two valid ordered sets.
S; The vector contains an /S/ in its first or fifth character, any characters before the S character are valid control characters other than /O/, /S/ and /T/ or form a valid ordered set, and all characters following the /S/ are data characters."

Also, on lines 40-42: "A valid ordered set consists of a valid /O/ character in the first or fifth characters and data characters in the three characters following the /O/."

Note - these will have to be added back in if 25GBASE-T is added, but need language separating out their 40G use from their 25G use.

SuggestedRemedy

Under value "C":
(line 21) replace item (b) with "b) one valid ordered set followed by four data bytes and zeros as shown in Figure 82-4 for block code 0x4B."
(line 22) delete item (c): "c) two valid ordered sets."

Under value "S":
(line 23), delete "or fifth" to read, "The vector contains an /S/ in its first character,"

On lines 40-42, delete "or fifth" and change "characters" to "character" to read, "A valid ordered set
consists of a valid /O/ character in the first character and data characters in the three characters following the /O/."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.3.6.4** *P* **117** *L* **37** # 1

Slavick, Jeff — Avago Technologies

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

In figure 113-17 there is an extra "+" on the exit for TX_E state going to target C

SuggestedRemedy

Remove the extranenous +

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Clean up exits to states TX_E and TX_T to make clear what goes with what:
Replace "(T_TYPE(tx_raw) = C+LII) +" with "T_TYPE(tx_raw) = (C + LII)" and move next to target C out of state TX_E,
Move "T_TYPE(tx_raw) = (E+D+T)" associated with exit from state TX_T to the left, abutting its exit from state TX_T, and
Move "T_TYPE(tx_raw) = D" down so that it is clear that it is associated with target D out of state TX_E.

Cl **113** *SC* **113.5.** *P* **157** *L* **29** # 81

Zimmerman, George — CME Consulting, Inc.

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

Extraneous "bb" at end of line.

SuggestedRemedy

delete "bb" after period on line 29.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 14)

Cl **113** *SC* **113.5.3** *P* **153** *L* **27** # 12

Anslow, Pete — Ciena

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

Comment i-54 against the Revision project D3.0 has changed all instances in 802.3 of "AC coupling" to "AC-coupling"
Also applies to PICS item PME18

SuggestedRemedy

Change "AC coupling" to "AC-coupling" on Page 153, line 27 and also on Page 189, line 37

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.5.4.3** *P* **156** *L* **17** # 111

Moffitt, Bryan CommScope

Comment Type **T** *Comment Status* **D** *Clamp Test*

Splitting some technical detail between this clause and the Annex creates confusion, and new technical information is available suggesting a change in source control. Change the paragraph to move all technical detail to the Annex.

SuggestedRemedy

replace with:
An 80 MHz to 2000 MHz test can be made using the cable clamp described in Annex 113A, 30 meter plug-terminated cabling that meets the requirements of 113.7, suitable broadband ferrites, and a common ground reference plane for this test equipment and the equipment under test. A controlled sine wave that is stepped across the entire frequency range is used to generate the external electromagnetic field and corresponding shield current.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.5.4.3** *P* **156** *L* **21** # 13

Anslow, Pete Ciena

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

There should be a (non-breaking) space between a number and its unit.
6dBm should be 6 dBm

SuggestedRemedy

Change "6dBm" to "6 dBm" where the space is non-breaking (Ctrl space)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.5.4.4** *P* **157** *L* **29** # 14

Anslow, Pete Ciena

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

spurious "bb" in "test.bb"

SuggestedRemedy

delete "bb" at the end of the subclause

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 81)

Cl **113** *SC* **113.6.1.1** *P* **158** *L* **2** # 15

Anslow, Pete Ciena

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

"Clause 45" should be a cross-reference

SuggestedRemedy

Make "Clause 45" a cross-reference

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.6.1.2** *P* **159** *L* **39** # 88

Zimmerman, George CME Consulting, Inc.

Comment Type **T** *Comment Status* **D** *Short Reach*

Table 113-18: short reach mode bit in autoneg page needs extension to 40G, and doesn't currently agree with clause 45 register.

SuggestedRemedy

Change "10GBASE-T PHY short reach mode" to "PHY short reach mode"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.7.1** *P* **162** *L* **45** # 72

Swanson, Steve Corning Incorporated

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

Table 113-1 does not contain balanced cabling as mentioned. (Table 113-1 is on page 91 and contains control codes)

SuggestedRemedy

Give the Table 113-1 on page 163 a different number and reference that Table on line 45 on page 162

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change Table 113-1 on page 163 to be next in sequence (Table 113-20), confirm cross reference points to correct table, and renumber remaining tables.

Cl **113** *SC* **113.7.2.3** *P* **164** *L* **16** # 71

Swanson, Steve — Corning Incorporated

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

There is an error in formula 113-14

SuggestedRemedy

Change frequency from "1<=f<=40" to "10<=f<=40"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.7.3.1** *P* **169** *L* **28** # 73

Swanson, Steve — Corning Incorporated

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

The text "When the computed PSANEXT value at a certain frequency exceeds 75 dB, the PSANEXT result at that frequency is for information only." is not clear.

SuggestedRemedy

Using the formula 113-28, PSANEXT values below 464MHz will be above 75 dB; are these not PASS/FAIL criteria? If so, it seems the formula 113-28 could be simplified and reduced to the frequency range 464MHz-2000MHz.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change "When the computed PSANEXT value at a certain frequency exceeds 75 dB, the PSANEXT result at that
frequency is for information only."
To: "When the computed PSANEXT values are greater than 75 dB they shall revert to 75 dB."

Cl **113** *SC* **113.7.4** *P* **170** *L* **26** # 82

Zimmerman, George — CME Consulting, Inc.

Comment Type **ER** *Comment Status* **D** *Short Reach*

These two paragraphs belong in the PMA section, not in the link segment specifications as it is a test and mode of PMA performance, similar to that in 113.5.4.1 or 113.5.4.4:
"In short reach mode (indicating operation over a short reach link segment) while receiving data from a transmitter compliant with specifications in 113.5.3 (whether or not in short reach mode), through a short reach link segment meeting the requirements of 113.7.4, a receiver shall operate with a frame error ratio less than 9.6 x 10^-10 for 800 octet frames with minimum IPG or greater than 799 octet IPG (e.g., operate with a BER less than 10^-12).

The PHY short reach register setting 1.131.0 indicates whether the PHY is operating in the short reach mode."

SuggestedRemedy

Delete the two paragraphs (lines 26 - 33) from 113.7.4
Add clause 113.5.4.5 Short reach mode after 113.5.4.4 with the following text (the same two paragraphs, just reversed in order):
"The PHY short reach register setting 1.131.0 indicates whether the PHY is operating in the short reach mode.

In short reach mode (indicating operation over a short reach link segment) while receiving data from a transmitter compliant with specifications in 113.5.3 (whether or not in short reach mode), through a short reach link segment meeting the requirements of 113.7.4, a receiver shall operate with a frame error ratio less than 9.6 x 10^-10 for 800 octet frames with minimum IPG or greater than 799 octet IPG (e.g., operate with a BER less than 10^-12)."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.7.4.1** *P* **170** *L* **50** # 116

Shariff, Masood — CommScope

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

Equation 113-32 is not correct since it is using 0.00065 x sqrt(f) instead of 0.00065 x f in the upper frequency range.

SuggestedRemedy

Change the upper frequency from 1000 to 2000 MHz

Also for the range 500 < f <= 2000 the formula should be

0.00649 x sqrt(f) + 0.000605 x f

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.7.4.1** *P* **170** *L* **52** # 74

Swanson, Steve — Corning Incorporated

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

There is an inconsistency in the formulas 113-31 and 113-32

SuggestedRemedy

Parameter B in formula 113-32 is only defined up to 1000MHz but insertion loss using parameter B is defined from 1 to 2000 MHz in formula 113-31.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See comment#116

Cl **113** *SC* **113.7.4.3.4** *P* **173** *L* **20** # 114

Shariff, Masood — CommScope

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

Equation 113-37 is using the wrong length adjustment term

SuggestedRemedy

Channge 5/24 with 24/5 in the equation to harmonize with TIA-568-C.2-1 draft 3.12

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.7.4.3.5** *P* **174** *L* **10** # 115

Shariff, Masood — CommScope

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

Equation 113-39 is using the wrong length correction term

SuggestedRemedy

Channge 5/24 with 24/5 in the equation to harmonize with TIA-568-C.2-1 draft 3.12

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **113.7.5** *P* **176** *L* **9** # 16

Anslow, Pete — Ciena

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

On line 9 "cstalk" should be "crosstalk"
On line 12 "following:ros" should be "following:"

SuggestedRemedy

On line 9 change "cstalk" to "crosstalk"
On line 12 change "following:ros" to "following:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 83)

Cl **113** *SC* **113.7.5** *P* **176** *L* **9** # 83

Zimmerman, George — CME Consulting, Inc.

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

typo "cstalk" should be "crosstalk" , and the "ros" ended up on line 12 where it shouldn't be.

SuggestedRemedy

line 9: replace "cstalk" with "crosstalk"
line 12: delete "ros"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 16)

Cl **113** *SC* **113.8.2.2** *P* **234** *L* **51** # 84

Zimmerman, George — CME Consulting, Inc.

Comment Type **E** *Comment Status* **D** *Editorial - Not EZ*

Editor's note has done its job of attracting notice.

SuggestedRemedy

Delete editor's note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113** *SC* **5.3.4** *P* **154** *L* **44** # 70

Klempa, Michael UNH IOL

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

I believe either the Transmitter PSD limits (113-11) or the figure (113-38) is wrong, the Upper last limit is -126 dBm/Hz while the figure looks more like -116.

SuggestedRemedy

Make them agree, either way.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. See comment 69

Cl **113** *SC* **5.3.4** *P* **155** *L* **27** # 69

Donahue, Curtis UNH-IOL

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

Figure 113-38 doesn't seem to reflect the Upper PSD values described in Eq (113-11). Specifically, from 7160-12000 MHz the upper limit is defined as -126 dBm/Hz but the figure shows a value closer to -116 dBm/Hz.

SuggestedRemedy

Re-draw Figure 113-38 to accurately represent the Upper PSD and Lower PSD limits defined in Eq (113-11) and (113-12).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113A** *SC* **113A** *P* **199** *L* **11** # 110

Moffitt, Bryan CommScope

Comment Type **E** *Comment Status* **D** *Clamp test*

There are now several different versions of cable clamp and the details shown only apply to one of them.

SuggestedRemedy

change line to:
This annex describes an example of a cable clamp and a representative methodology that should be used in the rejection of

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **113A** *SC* **113A.1** *P* **201** *L* **5** # 112

Moffitt, Bryan CommScope

Comment Type **T** *Comment Status* **D** *Clamp test*

Clamp data needs updating.

SuggestedRemedy

The electrical parameters of the clamp measured between the source connections and without installed cabling are as follows:
a) Insertion loss: < 3 dB below 1000 MHz and < 25 dB below 2000MHz
b) Return loss: > 3 dB below 1000 MHz and > 1 dB below 2000 MHz

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Consider with report of ad hoc.

Cl **113A** *SC* **113A.3** *P* **201** *L* **11** # 113

Moffitt, Bryan CommScope

Comment Type **T** *Comment Status* **D** *Clamp test*

Cable clamp validation and 113A.4 Test Setup should be modified based on new information to be presented, including additional instructions for testing unshielded cabling that can be used by 802.3bz

SuggestedRemedy

To be presented

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See presentation

Cl **113A** *SC* **113A.3** *P* **201** *L* **16** # 94

Zimmerman, George — CME Consulting, Inc.

Comment Type **T** *Comment Status* **D** *Clamp test*

Annex 113A describes test configurations and methods - it should be generic so it can be used with multiple PHYs. Examples of the references for 40GBASE-T should be given.

SuggestedRemedy

P201 L16: Change "uses cabling that meets the requirements of Clause 113.7." to "uses cabling that meets the requirements of the link segment for the PHY under test, e.g., Clause 113.7 for 40GBASE-T."

In 113A.4:
P202 L48: Change "An up to 30-meters of cabling that meets the specification of Clause 113.7 is connected between two 40GBASE-T PHYs and inserted into the cable clamp. The cable should be terminated on each end with an MDI connector plug specified in Clause 113.8.1." to
"An up to the maximum specified length of cabling that meets the link segment specification for the PHY under test, e.g., Clause 113.7 for 40GBASE-T, is connected between two such PHYs and inserted into the cable clamp. The cable should be terminated on each end with an MDI connector plug specified for the MDI of the PHY under test, e.g., Clause 113.8.1 for 40GBASE-T."

P202 L53 - replace "40GBASE-T" with "PHY"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **28** *SC* **28.3.1** *P* **21** *L* **10** # 44

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **D** *PMA/PMD*

"40GigT; represents that the 40GBASE-T PMA is the signal source." - please align with 802.3bx, comment i-61 and i-60 (http://www.ieee802.org/3/bx/comments/P8023-D3p0-Comments_Final_byID.pdf)

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED REJECT.
10GBASE-T PHYs do not include PMD, and neither does 40GBASE-T.
Comments i-60 and i-61 on 802.3bx were with regard to clause 73 autoneg, not clause 28 autoneg, where the BASE-T PHYs are.

Cl **30** *SC* **30.5.1.1.22** *P* **28** *L* **19** # 45

Hajduczenia, Marek — Bright House Network

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

"see 945.2.1.69" - not sure we have 945 Clauses :)

SuggestedRemedy

Remove "9"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.24** *P* **28** *L* **33** # 46

Hajduczenia, Marek — Bright House Network

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

"see 45.2.1.79.2 and 55.4.5.1 and 113.4.5.4" - missing serial comma, unnecesary "and"

SuggestedRemedy

Change to "see 45.2.1.79.2, 55.4.5.1, and 113.4.5.4" with proper editorial markup

Similar change in 30.5.1.1.25

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1** *P* **31** *L* **21** # 19

Anslow, Pete — Ciena

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

The register names for registers 1.133 through 1.144 are shown in Table 45-3 as changing from starting "10GBASE-T" to "MultiGBASE-T".
However, the register names in the defining subclauses 45.2.1.66 through 45.2.1.77 do not start with "10GBASE-T", and are not modified in the current draft.

To fix this issue, either:
a) the register names in Table 45-3 should remain as shown and the register names in 45.2.1.66 through 45.2.1.77 changed to start "MultiGBASE-T"
or
b) the register names in Table 45-3 should be shown as having "10GBASE-T" in strikethrough font to make them the same as in the defining subclauses.

Option a) has the merit of making the PHYs that use these registers clear, which it would otherwise not be.

SuggestedRemedy

either:
a) leave the register names in Table 45-3 as they are and the change the register names in 45.2.1.66 through 45.2.1.77 to start "MultiGBASE-T"
(preferred)
or
b) change the register names in Table 45-3 to start with "10GBASE-T" in strikethrough font to make them the same as in the defining subclauses.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Taking option (b) - see comment 95
The registers in question could be used by more backplane and optical PHYs as they develop more advanced link monitoring capabilities.

Cl **45** *SC* **45.2.1** *P* **31** *L* **22** # 95

Zimmerman, George — CME Consulting, Inc.

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

Table 45-3 register names for Register 1.133 through 1.144 (SNR operating margin, minimum margin, and RX Signal power registers) do not agree with names of registers in referenced subclauses (subclauses 45.2.1.66 through 45.2.1.77 do not include "10G" and hence don't need the change to MultiG).
This defect exists in the base standard and the revision draft.

SuggestedRemedy

Change names for Registers 1.133 through 1.144 in Table 45-3 to delete "10GBASE-T" from the name, as is in the base standard for the subclauses 45.2.1.66 though 45.2.1.77.
Do not add MultiGBASE-T to these names in 802.3bq.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
The registers in question could be used by more backplane and optical PHYs as they develop more advanced link monitoring capabilities.

Cl **45** *SC* **45.2.1.12.9a** *P* **34** *L* **8** # 102

Zimmerman, George — CME Consulting, Inc.

Comment Type **E** *Comment Status* **D** *PMA/PMD*

text incorrectly calls out 40GBASE-T PMA/PMD type

SuggestedRemedy

Change lines 8 and 11 (2 instances), deleting "/PMD" to read "40GBASE-T PMA type"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.6** *P* **32** *L* **1** # 47

Hajduczenia, Marek — Bright House Network

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

Table 45–7 contains just one marked change in row "1 0 0 1 1 x1 = reserved for future use" - it seems that row "1 0 0 1 1 0 = 40GBASE-T PMA/PMD" should be also marke din underlined, since it is the one being added?

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.6** *P* **32** *L* **14** # 118

Marris, Arthur — Cadence Design Syst

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

"1 0 0 1 1 0 = 40GBASE-T PMA/PMD" needs to be underlined because it is added text

SuggestedRemedy

underline "1 0 0 1 1 0 = 40GBASE-T PMA/PMD"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.6** *P* **32** *L* **14** # 101

Zimmerman, George — CME Consulting, Inc.

Comment Type **E** *Comment Status* **D** *PMA/PMD*

Table 45-7 incorrectly lists 40GBASE-T PMA/PMD Should be simply PMA, as 40GBASE-T does not have a PMD (10GBASE-T is listed in the same table as just PMA)

SuggestedRemedy

Delete "/PMD" from line 14 entry for 40GBASE-T to read: "40GBASE-T PMA"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.6** *P* **32** *L* **5** # 20

Anslow, Pete — Ciena

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

Comment i-51 against 802.3bx D3.0 has changed "reserved for future use" to "reserved" in Table 45-7.
The inserted "1 0 0 1 1 0 = 40GBASE-T PMA/PMD" should be underlined.
The row "1 0 1 1 1 1 = reserved for future use" should be "1 0 1 1 1 1 = 100GBASE-SR4 PMA/PMD"

SuggestedRemedy

Change "reserved for future use" to "reserved" (2 instances as the third will be removed).
Show "1 0 0 1 1 0 = 40GBASE-T PMA/PMD" in underline font.
Change "1 0 1 1 1 1 = reserved for future use" to "1 0 1 1 1 1 = 100GBASE-SR4 PMA/PMD"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.62** *P* **34** *L* **16** # 48

Hajduczenia, Marek — Bright House Network

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

Font mess: added text "MultiG" is in smaller font than the remainder of the "BASE-T" -

SuggestedRemedy

check the size of the newly added text "MultiG" and make sure it is the same size and style (T, Text) as the remainder of the text - this applies to the whole Clause 45 - there are multiple locations where the same font size misalignment is present.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.62** *P* **34** *L* **16** # 21

Anslow, Pete — Ciena

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

The text as modified is: "The assignments of bits in the MultiGBASE-T status register is shown in Table 45–54."

The use of the word "assignments" is almost unique within Section 4. There are:
135 instances of "the assignment of bits in"
1 instance of "the assignments of bits in"

SuggestedRemedy

Change "assignments" to "assignment" by showing "assignments" in strikethrough font and "assignment" underlined.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.64** *P* **34** *L* **45** # 22

Anslow, Pete — Ciena

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

In "MultiGBASE-T TX power backoff", the space between MultiGBASE-T and TX is shown underlined.

SuggestedRemedy

Remove the underline

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.64** *P* **34** *L* **50** # 99

Zimmerman, George — CME Consulting, Inc.

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

type - 10/40GBASE-T

SuggestedRemedy

Replace 10G/40BASE-T with 10/40GBASE-T.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.64.1** *P* **35** *L* **6** # 49

Hajduczenia, Marek — Bright House Network

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

Space missing in "negotiation process.The 10GBASE-T"

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.1.2** *P* **37** *L* **23** # 50

Hajduczenia, Marek — Bright House Network

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

Editorial improvement for "10GBASE-R or 10GBASE-T or 40GBASE-T PCS" for consistency with the remainder of the text

SuggestedRemedy

Change to "10GBASE-R, 10GBASE-T, or 40GBASE-T PCS" with proper editorial markup

Cimilar change needed in Table 45–128, Table 45–129

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.13** *P* **39** *L* **33** # 52

Hajduczenia, Marek — Bright House Network

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

the second "the" not needed in "the BASE-R, 10GBASE-T, or the 40GBASE-T "

SuggestedRemedy

Change to "the BASE-R, 10GBASE-T, or 40GBASE-T "

Similar change in:
45.2.3.14, page 41, line 17
45.2.3.14.1, page 41, line 41
45.2.3.14.1, page 41, line 43
45.2.3.14.2, page 42, line 5
45.2.3.14.2, page 42, line 7
several PICS in 45.5.3.7

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.13.4** *P* **40** *L* **45** # 53

Hajduczenia, Marek — Bright House Network

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

After the changes, the new sentence does not read correctly: "This bit is a direct reflection of the state of the hi_lfer variable in the 10GBASE-T and 40GBASE-T 64B/65B state diagrams and is defined in 55.3.6.1 and 113.3.6.2.2."

SuggestedRemedy

Suggest to change to (changes shown in >><<): "This bit is a direct reflection of the state of the hi_lfer variable in the 10GBASE-T and 40GBASE-T 64B/65B state diagrams, defined in 55.3.6.1 and 113.3.6.2.2 >>for 10GBASE-T and 40GBASE-T, respectively<<".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.14** *P* **41** *L* **14** # 54

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **D** *Editorial - Not EZ*

Inconsistent changes: in 45.2.3.14, the text in line 14 reads "A PCS device that does not implement BASE-R, 10GBASE-T, and 40GBASE-T shall return a zero for all bits in the BASE-R and MultiGBASE-T PCS status 2 register." but a similar text in 45.2.3.13 reads "A PCS device that does not implement BASE-R, 10GBASE-T, or 40GBASE-T shall return a zero for all bits in the BASE-R and
MultiGBASE-T PCS status 1 register"

Note that "and" in the first case was carried over and placed in front of "40GBASE-T and in the second case it was converted into "or" placed in front of "40GBASE-T"

SuggestedRemedy

I belive the change done in 45.2.3.14 is correct (a PCS device not implementing any of the PHYs, hence "and") and 45.2.3.13 needs to be corrected (change "or" to "and")

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change 45.2.3.13 to read "A PCS device that implements neither BASE-R, 10GBASE-T nor 40GBASE-T shall…"
Change 45.2.3.14 to read "A PCS device that implements neither BASE-R, 10GBASE-T, nor 40GBASE-T shall …"

Cl **45** *SC* **45.2.3.7** *P* **38** *L* **33** # 51

Hajduczenia, Marek — Bright House Network

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

The row with definition of register 3.8.6 should be shown in underline - it is new content

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Editing instruction for new row is an "insert" instruction, hence no underline, rewrite editing instruction as two instructions to make this clear:
"Change the reserved row in Table 45–124 as shown below, and
(line break)
Insert new row for name and description for bit 3.8.6 below it as follows
(unchanged rows not shown):"

Cl **45** *SC* **45.2.3.9** *P* **39** *L* **6** # 98

Zimmerman, George — CME Consulting, Inc.

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

Table 45-125 title does not match register name in clause nor in title of table in 802.3bx D3p1

SuggestedRemedy

Change title to match 802.3bx D3p1 & clause header:
Insert "control and" so table title reads: "EEE control and capability bit definitions"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.10** *P* **44** *L* **20** # 56

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **D** *10G Maintenance*

Markup of changes to bit 7.32.2 in Table 45–207 is confusing.

Content in 802.3bx, D3.1

1 = Local device requests that link partner reset PMA training PRBS every frame
0 = Local device requests that link partner run PMA training PRBS continuously

Content in 802.3bq, D2.1

Value always 0
0 = Local device requests that link partner run PMA training PRBS continuously

SuggestedRemedy

It seems that this change affects the operation of 10GBASE-T for some reason, but it is not clear why this change was made at all. This project does spec changes to add 40GBASE-T only.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
This text was added in response to maintenance request 1266, to delete a broken and so-far unused mode of operation in 10GBASE-T. See comments 59 & 63 for resolution.

Cl **45** *SC* **45.2.7.10** *P* **44** *L* **21** # 23

Anslow, Pete Ciena

Comment Type **TR** *Comment Status* **D** *10G Maintenance*

The description for bit 7.32.2 starts "Value always 0" in normal font and "1 = Local device requests that link partner reset PMA training PRBS every frame" in strikethrough font." This makes no sense as the base standard has the latter text, but not the former.

Also, 45.2.7.10.5 which defines this bit has had the bit name changed and then the existing definition text replaced with "This bit is not defined for 10GBASE-T but reserved for future use."

Similar set of issues with bit 7.33.9 except: "Value always 0" is underlined in Table 45-208; in 45.2.7.11.7 the base title is incorrect (should be Link partner, not LP); and the definition in 45.2.7.11.7 is not in strikethrough font.

SuggestedRemedy

Either:
a) Change the name of the bit to start "10GBASE-T" and reinstate the definition in 45.2.7.10.5.
or
b) Change the bit to be reserved by changing the Name in Table 45-207 from "LD PMA training reset request" to "Reserved" and showing all of the existing Description text in strikethrough with "Value always 0" in underline and changing R/W to RO. Also delete 45.2.7.10.5 entirely.

Option b) seems to be beyond the scope for the P802.3bq project unless there is a maintenance request I have missed.

Make an equivalent set of changes for bit 7.33.9.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
This text was added in response to maintenance request 1266, to delete a broken and so-far unused mode of operation in 10GBASE-T. It is desired to preclude this bit from future assignment. See comments 59 & 63 for resolution.

Cl **45** *SC* **45.2.7.10** *P* **44** *L* **44** # 55

Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **D** *Editorial - not EZ*

Given that this project is adding 40GBASE-T, I would assume that row with bits 7.32.11, 7.32.4, 7.32.3 should be shown in underline - these are new bits, taken out from reserved space

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
New rows are insert instructions, so now underline. Rewrite editing instruction to make this clear:
Change the title, the reserved row, and the name and description of bits 7.32.0, 7.32.1, 7.32.2 in
Table 45–207 and
(line break)
Insert rows for bits 7.32.11, 7.32.4 and 7.32.3 above and below the reserved row, respectively
as follows (unchanged rows not shown):

Cl **45** *SC* **45.2.7.10** *P* **45** *L* **1** # 24

Anslow, Pete Ciena

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

The text "aR/W = Read/Write, RO = Read only" should be a footnote to Table 45-207 and hence on the same page as the table

SuggestedRemedy

Fix the footnote.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.10** *P* **45** *L* **1** # 57

Hajduczenia, Marek Bright House Network

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

Footnote to Table 45–207 somehow got moved to next page.

SuggestedRemedy

Beat on Frame, make sure footnote is attached to table and now allowed to move to next page on its own.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.10.4c** *P* **45** *L* **18** # 25

Anslow, Pete — Ciena

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

The definition of bit 7.32.4 should come before the definition for bit 7.32.3

SuggestedRemedy

Swap the order of the definitions for bits 7.32.3 and 7.32.4

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.10.4c** *P* **45** *L* **24** # 58

Hajduczenia, Marek — Bright House Network

Comment Type **E** *Comment Status* **D** *Editorial - Not EZ*

Remove editorial note - if other projects indeed need to use this register, they will do :) with or without permission from this TF

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.10.5** *P* **45** *L* **31** # 59

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **D** *10G Maintenance*

If this bit is indeed reserved for future use, then in Table 45–207, it should be marked as reserved and not as "10GBASE-T LD PMA training reset request"

SuggestedRemedy

If this is what needs to be done for 10GBASE-T, mark the row for bit 7.32.2 as Reserved, and do not give any name indicating it is used by 10GBASE-T.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
This text was added in response to maintenance request 1266, to delete a broken and so-far unused mode of operation in 10GBASE-T. It is desired to preclude this bit from future assignment. See comment 63 for related resolution

Change description of bit 7.32.2 in Table 45-207 to read:
"Function deprecated - Value always 0"
(Delete (strikeout) "0 = Local device requests that link partner run PMA training PRBS continuously")

Replace the (entire) text of 45.2.7.10.5 to read:
"Bit 7.32.2 is deprecated. Prior to July 2015 this bit was used to control an optional periodic training sequence for 10GBASE-T training. The value of this bit should always be set to zero, indicating the local device expects link partner to run PMA
training PRBS continuously through every PMA training frame. For a 10GBASE-T PHY, the value of one in bit 7.32.2 is reserved."

Cl **45** *SC* **45.2.7.10.7** *P* **45** *L* **42** # 60

Hajduczenia, Marek — Bright House Network

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

No editorial markup in line 42

SuggestedRemedy

Underline: "10GBASE-T "

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 26)

Cl **45** *SC* **45.2.7.10.7** *P* **45** *L* **42** # 26

Anslow, Pete — Ciena

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

The added "10GBASE-T" in the title of 45.2.7.10.7 should be underlined

SuggestedRemedy

Underline "10GBASE-T"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of 60)

Cl **45** *SC* **45.2.7.11** *P* **46** *L* **1** # 61

Hajduczenia, Marek — Bright House Network

Comment Type **ER** *Comment Status* **D** *Editorial - Not EZ*

MIssing editorial markup in Table 45–208. Rows with bits 7.33.8 and 7.33.2 are newly added.

SuggestedRemedy

Underline content in row with bits 7.33.8 and 7.33.2

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Rewrite editing instruction to show two instructions - change and insert
Change the title, the reserved row, and the names and descriptions for bits 7.33.9, 7.33.1 and 7.33.0 in
Table 45–208 and
(line break)
Insert row for bit 7.33.8 before the reserved row, and bit 7.33.2 after reserved row as follows (unchanged rows not shown):

Cl **45** *SC* **45.2.7.11** *P* **46** *L* **15** # 27

Anslow, Pete — Ciena

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

In Table 45-208, "Value always 0, writes ignored" has been changed to "Value always 0" in the base standard.
The reserved bits in this row are "7.33.8:2" in the base standard, so there should be a "2" in strikeout font.

SuggestedRemedy

Change "Value always 0, writes ignored" to "Value always 0"
Show "8:2" in strikeout and "7:3" underlined

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.11** *P* **46** *L* **16** # 62

Hajduczenia, Marek — Bright House Network

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

Multiple tables, including Table 45–208 and Table 45–207, are not aligned with P802.3bx, D3.1. For example, Reserved bit 7.33.8:2 has description changed from "Value always 0, writes ignored" to "Value always 0"

SuggestedRemedy

Align tables in Clause 45 with P802.3bx, D3.1

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7.11.7** *P* **47** *L* **6** # 63

Hajduczenia, Marek — Bright House Network

Comment Type **TR** *Comment Status* **D** *10G Maintenance*

It is really odd to provide definition of a bit for 10GBASE_T use and then state that "This bit is not defined for 10GBASE-T but reserved for future use."

SuggestedRemedy

If this bit is indeed reserved for future use, then mark bit 7.32.9 as Reserved in Table 45–208

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
This text was added in response to maintenance request 1266, to delete a broken and so-far unused mode of operation in 10GBASE-T. See comment 59 for a related resolution.
A value of 1 in this bit would likely be an error condition, the commenter is correct, this is a read-only bit, giving the link partner's request.

In the description of bit 7.32.9 in Table 45-208, replace "Value always 0" with:
"1 - Value not defined for 10GBASE-T"

Change inserted text of 45.2.7.11.7 (P47 L10) from "This bit is not defined for 10GBASE-T but reserved for future use."
to read:
"Bit 7.32.9 is deprecated. Prior to July 2015 this bit was used to report the link partner's request for an optional periodic training sequence for 10GBASE-T training. A value of one in this bit is reserved for a 10GBASE-T PHY, and bit 7.32.9 should always read zero."

Cl **45** *SC* **45.2.7.11.8a** *P* **47** *L* **37** # 18

Anslow, Pete — Ciena

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

Comment #183 against D2.0 was not implemented correctly.

As the new subclause for "40GBASE-T Fast retrain ability (7.33.0)" is being inserted after 45.2.7.11.8, which is the last level 5 subclause in 45.2.7.11, the new subclause number should be 45.2.7.11.9 not 45.2.7.11.8a. This was correct in the Suggested Remedy of comment #183 (ACCEPT)

SuggestedRemedy

Change editing instruction to:
"Insert 45.2.7.11.9 after 45.2.7.11.8 as follows:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.3.7** *P* **50** *L* **10** # 96

Zimmerman, George — CME Consulting, Inc.

Comment Type **ER** *Comment Status* **D** *Editorial - Not EZ*

PICS RM15 should not include 40GBASE-T as an exception case, since it already says "operating at 10Gb/s"

SuggestedRemedy

Delete proposed change to RM15, to insert "or 40GBASE-T"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.3.7** *P* **50** *L* **13** # 97

Zimmerman, George — CME Consulting, Inc.

Comment Type **TR** *Comment Status* **D** *Editorial - Not EZ*

Change to PICS RM16 incorrectly and inadvertently extends it to all 40Gb/s PHYs and yet excepts 40GBASE-T.

SuggestedRemedy

Delete proposed changes to PICS RM16 to insert 40 Gb/s and to exclude 40GBASE-T.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.3.7** *P* **50** *L* **43** # 100

Zimmerman, George — CME Consulting, Inc.

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

RM40: usage of MultiGBASE-T is awkward, making it look like "MultiGBASE-T" is a single PHY. Meaning is "does not support ANY MultiGBASE-T"

SuggestedRemedy

insert "any" before last "MultiGBASE-T" to read:
"Reads from BASE-R and MultiGBASE-T PCS status 2 register return zero for PCS that does not support 10/40/100GBASE-R or any MultiGBASE-T"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.5.3.9** *P* **51** *L* **6** # 64

Hajduczenia, Marek — Bright House Network

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

Font size inconsistency in Feature column for AM51

SuggestedRemedy

Please align font format and size

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **55** *SC* **55.3.4** *P* **53** *L* **18** # 104

Zimmerman, George — CME Consulting, Inc.

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

A frame-drawn figure (see P802.3bz D0p1, Figure 126-11) is now available, insert & delete editors note.

SuggestedRemedy

Insert frame figure from P802.3bz D0p1 Figure 126-11.
Delete editor's note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **55** *SC* **55.3.4** *P* **53** *L* **4** # 28

Anslow, Pete — Ciena

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

Editing instruction should be "Delete the second paragraph of 55.3.4 as shown:"

SuggestedRemedy

Change editing instruction to:
"Delete the second paragraph of 55.3.4 as shown"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **55** *SC* **55.3.4** *P* **53** *L* **5** # 65

Hajduczenia, Marek — Bright House Network

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

Editorial instruction not precise enough.

SuggestedRemedy

Change "Delete text in 55.3.4 as shown:" to "Delete the second paragraph in 55.3.4 as shown below:"

Similarly, instructions on page 54, line 39, change "Change 55.3.5.3 as shown:" to "Change the first paragraph in 55.3.5.3 as shown below:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. See comments 28 & 29

Cl **55** *SC* **55.3.5.3** *P* **54** *L* **38** # 29

Anslow, Pete — Ciena

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

Editing instruction should be "Change the first paragraph of 55.3.5.3 as shown:"

SuggestedRemedy

Change editing instruction to:
"Change the first paragraph of 55.3.5.3 as shown:"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **55** *SC* **55.3.5.3** *P* **54** *L* **45** # 103

Zimmerman, George — CME Consulting, Inc.

Comment Type **ER** *Comment Status* **D** *10G Maintenance*

Strikeout inadvernently deleted the nominal operating mode for LPI. Only should delete the reference to periodic reinitialization.

SuggestedRemedy

Reinstate sentence: "The training sequence without periodic reinitialization described in 55.3.4 shall be used during the LPI mode, with the scramblers free-running from PCS Reset." , striking out "without peridic reinitialization".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **55** *SC* **55.6.2** *P* **55** *L* **33** # 30

Anslow, Pete — Ciena

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

55.6.2 is not a paragraph

SuggestedRemedy

In the editing instruction change "...bits in paragraph 55.6.2..." to "...bits in 55.6.2..."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **78** *SC* **78.5** *P* **58** *L* **3** # 66

Hajduczenia, Marek — Bright House Network

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

Inconsistenct changes: "10GBASE-T PHY and 40GBASE-T PHY" - in Clause 45, similar text was modified to read "10GBASE-T and 40GBASE-T PHY"

SuggestedRemedy

Change "10GBASE-T PHY and 40GBASE-T PHY" to "10GBASE-T and 40GBASE-T PHY" on page 58, line 3 and 5

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **78** *SC* **78.5** *P* **58** *L* **9** # 105

Zimmerman, George — CME Consulting, Inc.

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

Table 78-5 is Table 78-4 in IEEE P802.3bx D3p1

SuggestedRemedy

Change editing instruction and table title from Table 78-5 to Table 78-4.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **80** *SC* **80.1.3** *P* **59** *L* **28** # 106

Zimmerman, George — CME Consulting, Inc.

Comment Type **E** *Comment Status* **D** *PMA/PMD*

Figure 80-1: 40GBASE-T does not have a PMD, but one is shown, and mentioned in the descriptive text at line 50 in 80.1.4,
Also in Figure 81-1

SuggestedRemedy

Delete PMD from 40GBASE-T stack in Figures 80-1 and 81-1
delete ", Physical Medium Dependent (PMD) sublayer" from line 50 (80.1.4)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **80** *SC* **80.1.3** *P* **59** *L* **9** # 31

Anslow, Pete — Ciena

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

Comment #196 against D2.0 was ACCEPT but has not been implemented correctly.
As explained in the comment:
"The point of the list in 80.1.3 is to define the locations where the data-path widths cannot be changed by the implementation. Each element in the existing list states what the width at that location is."
The suggested remedy was:
Change to: "k) The MDI as specified in Clause 113 for 40GBASE-T uses a 4 lane data path." but the "uses a 4 lane data path." part (which is the point of having the item at all) is missing from the draft.

SuggestedRemedy

Add "uses a 4 lane data path" to the end of item k)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **80** *SC* **80.1.5** *P* **60** *L* **14** # 67

Hajduczenia, Marek — Bright House Network

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

The value of wholesale replacement of Table 80-2 is questionable.

SuggestedRemedy

Show changes to existing Table 80-2 instead (new 40GBASE-T PCS/PMA, and new row for 40GBASE-T)

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Other comments to add column for Clause 28 Auto negotiation, which was overlooked and requires all rows in the table to be listed.

Cl **80** *SC* **80.1.5** *P* **60** *L* **17** # 107

Zimmerman, George — CME Consulting, Inc.

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

Table 80-2 shows 40GBASE-T using Clause 73 Auto-negotiation, should be Clause 28

SuggestedRemedy

Add column for Clause 28 Auto-negotiation to Table 80-2, Delete "M" in row for 40GBASE-T from column for Clause 73 Auto-negotiation, Add "M" in row for 40GBASE-T in new column for Clause 28 Auto-negotiation.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of comment 5, overlap with comment 7)

Cl **80** *SC* **80.1.5** *P* **60** *L* **38** # 7

Brown, Matt APM

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

In Table 80-2 several columns in the 40GBASE-T appear to be incorrect.
40GBASE-T uses Clause 28 AN, not Clause 73.
Clause 81 RS is mandatory
Clause 83 PMA is optional (necessary when XLAUI is used)
Clause 83B XLAUI is not applicable since this is a module interface, unless this is implying that the PCS/PMA/PMD may reside on a module.

SuggestedRemedy

In Table 80-2...
Add a new column for Clause 28 AN with "M" in the 40GBASE-T row and no text in the other rows.
In the 40GBASE-T row and Clause 81 RS column put "M".
In the 40GBASE-T row and Clause 83 PMA column put "O".
In the 40GBASE-T row and Annex 83B XLAUI Column delete "O".

This table is getting a bit tight. Consider creating a new table for 40GBASE-T PHY or for the 40GBASE-KR4/CR4/T PHYs.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (overlap with comments 107, 108 & 5)

Cl **80** *SC* **80.1.5** *P* **60** *L* **39** # 5

Slavick, Jeff Avago Technologies

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

In table 80-2 I believe the RS function is required for 40GBASE-T but XLGMII is optional

SuggestedRemedy

Add an M under Clause 81 RS for the 40GBASE-T row into Table 80-2

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (Dup of comment 107)

Cl **80** *SC* **80.1.5** *P* **60** *L* **39** # 108

Zimmerman, George CME Consulting, Inc.

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

Table 80-2 should show mandatory RS for 40GBASE-T, and optional Clause 82 PCS to correspond with XLAUI text in Clause 113 (see page 66 line 3)

SuggestedRemedy

Add "M" for 40GBASE-T in RS column, add "O" for Clause 82 PCS in 40GBASE-T row

Proposed Response *Response Status* **W**

PROPOSED ACCEPT. (overlap with comment 7)

Cl **80** *SC* **80.1.5** *P* **60** *L* **45** # 68

Hajduczenia, Marek Bright House Network

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

Note is not in correct format.

SuggestedRemedy

Change "Note—" to "NOTE-" and apply a correct style to it.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Note to be deleted if comment 7 is accepted, adding Clause 28 to table 80-2

Cl **80** *SC* **80.1.5** *P* **65** *L* **32** # 8

Brown, Matt APM

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

There is an instruction to add the following next text as a note to Table 80-2.
"Note: —40GBASE-T uses Clause 28 Clause 28 Auto-negotiation and is defined relative to the XLGMII interface."
It is not clear what this means. I suspect it means that Clause 113 defines the PHY not the physical layer.
However, in real system a complete physical layer is required and it is helpful to specify the entire phyical layer explicitly as is done for all other 40GBASE PHYs.

SuggestedRemedy

Delete this note and indicate all relevant sublayers including the RS in Table 80-2.

Note that I have submitted another comment which partially addresses Table 80-2 in this regard.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE. Note will be deleted if comment 7 is accepted

Cl **99** *SC* *P* **19** *L* **46** # 109

Zimmerman, George CME Consulting, Inc.

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

Include parallel projects IEEE P802.3bs, IEEE P802.3by and IEEE P802.3bz in note.

SuggestedRemedy

Include parallel projects IEEE P802.3bs, IEEE P802.3by and IEEE P802.3bz in note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **99** *SC* *P* **2** *L* **6** # 117

Marris, Arthur — Cadence Design Syst

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

make XLGMII non-breaking

SuggestedRemedy

make XLGMII non-breaking

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **99** *SC* *P* **3** *L* **20** # 32

Anslow, Pete — Ciena

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

The introductory text provided by the IEEE 802.3 WG Chair has been changed.
The latest version can be found in the 802.3 FrameMaker template or in Section 1 of the Revision project 802.3bx D3.1

SuggestedRemedy

Update the introduction text (paragraphs 2, 3, and 4 on page 3 of the draft) to the latest version.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **99** *SC* *P* **3** *L* **36** # 33

Anslow, Pete — Ciena

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

As the P802.3bq draft is not currently approved it is inappropriate to have text: "At the date of IEEE Std 802.3bq-2015 publication,..."

Same issue on page 4, line 25

SuggestedRemedy

Change "IEEE Std 802.3bq-2015" to "IEEE Std 802.3bq-201x" on page 3, line 36 and change "IEEE Std 802.3bqTM-2015" to "IEEE Std 802.3bqTM-201x" on page 4, line 25

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **A** *SC* **A** *P* **193** *L* **1** # 6

Brown, Matt — APM

Comment Type **ER** *Comment Status* **D** *Editorial - Not EZ*

There are no instructions to edit Annex A.

SuggestedRemedy

Delete Annex A.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Annex A will be removed by end of WG ballot if there are not edits to be made, per Editor's note already there.