

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 00 SC P L # 482  
Brown, Matt APM

Comment Type E Comment Status A Format

For Figure 113-1, use similar format/syntax for similar figures for other 25G, 40G, and 100G PHYs. As an example, see 802.3bx D2.1 Figure 80-1.

*SuggestedRemedy*

For XLGMII use superscript "1".  
Replace note "\*\*XLGMII" with "NOTE 1--XLGMII is optional". Alternately, this is the only PHY that states this in this particular diagram. Consider removing this note.  
Change "FORTY GIGABIT" to "40 GIGABIT"

Response Response Status C

ACCEPT IN PRINCIPLE.

Figure to be cleaned up to align with style of both 25G/40G/100G and 10GBASE-T PHYs.  
Delete note "XLGMII is optional" with  
Change FORTY GIGABIT to 40 GIGABIT

CI 00 SC 0 P L # 117  
Anslow, Pete Ciena

Comment Type ER Comment Status A EZ

All occurrences of "ordered\_set" have been changed to "ordered set" in 802.3bx draft D3.0

*SuggestedRemedy*

Change all instances of "ordered\_set" to "ordered set" throughout the draft.

Response Response Status W

ACCEPT.

CI 00 SC 0 P L # 116  
Anslow, Pete Ciena

Comment Type TR Comment Status A 25G

The objectives of the P802.3bq project were changed by motion #32 of the Berlin plenary to include:

"Support a data rate of 25 Gb/s at the MAC/PLS Service Interface  
Define a single 25 Gb/s PHY supporting operation on the link segment"

This draft does not include a PHY to satisfy these objectives

*SuggestedRemedy*

Either:  
remove the objectives  
or:  
modify the project PAR and CSD responses to reflect the additional objectives and revise the draft to include a suitable PHY

Response Response Status W

ACCEPT IN PRINCIPLE.  
Objectives are removed AND  
PAR modifications were accidentally omitted from motions at Berlin plenary - project CSD modifications were approved.  
Move project PAR for WG approval and progress project documentation at earliest opportunity.

CI 00 SC 0 P 1 L 12 # 251  
Grow, Robert RMG Consulting

Comment Type E Comment Status A EZ

Awkward alignment.

*SuggestedRemedy*

Make left justified rather than left right justified. Also title page 19.

Response Response Status C

ACCEPT.

CI 00 SC 0 P 1 L 29 # 252  
Grow, Robert RMG Consulting

Comment Type E Comment Status A EZ

Didn't edit the bracketed text

*SuggestedRemedy*

Replace bracketed text with: for Working Group balloting

Response Response Status C

ACCEPT. Dup of comments 405, 474, 208

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 00 SC 0 P 1 L 32 # 118

Anslow, Pete

Ciena

Comment Type E Comment Status A EZ

The copyright year should be "2015" not "201x", "2014", or "2012" as it is in the various parts of the draft.

*SuggestedRemedy*

Change the variable "copyright\_year" to "2015" in one of the Framemaker files, then with that file open, in the left hand pane highlight all of the other files in the book and use File, Import, Formats, Deselect All, Variable definitions, Import.

Response Response Status C

ACCEPT. Dup of comment 388

CI 00 SC 0 P 1 L 54 # 388

Remein, Duane

Huawei Technologies

Comment Type ER Comment Status A EZ

Copyright date is not 201x

*SuggestedRemedy*

Change to 2015

Response Response Status W

ACCEPT. Dup of comment 118

CI 00 SC 0 P 11 L 9 # 115

Anslow, Pete

Ciena

Comment Type E Comment Status A EZ

Amendments to 802.3 are usually ordered with all of the clauses first and the Annexes second.

*SuggestedRemedy*

Move all of the Annexes to be after Clause 113

Response Response Status C

ACCEPT.

CI 00 SC 0 P 18 L 27 # 255

Grow, Robert

RMG Consulting

Comment Type E Comment Status A Format

Something crept into the definitions here, a space is needed between the number and title.

*SuggestedRemedy*

Fix FrameMaker definitions.

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to fix spacing in table of contents. Dup of 451

CI 00 SC 0 P 23 L 13 # 409

Zimmerman, George

CME Consulting

Comment Type E Comment Status A EZ

Replace "as appropriate" with direct reference  
Consider comment generic to editing instructions on the draft

*SuggestedRemedy*

Replace "as appropriate" by reference to where row or text is inserted

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to review draft and replace 'as appropriate' with specific references and instructions.

CI 00 SC 0 P 25 L 54 # 453

Frazier, Howard

Broadcom Corporation

Comment Type ER Comment Status A EZ

Copyright year is incorrect.

*SuggestedRemedy*

Change to 2015.

Response Response Status W

ACCEPT. See comment 118

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 00 SC 0 P 3 L 1 # 114  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

As correctly indicated on Page 1, this will be an amendment to IEEE Std 802.3-201x (the outcome of the 802.3bx revision) rather than IEEE Std 802.3-2012.

The headers in the draft incorrectly say "Draft Amendment to IEEE Std 802.3-2012"

Also, the header for the frontmatter is missing the "P" from "P802.3bq"

## SuggestedRemedy

Change all of the headers to say "Draft Amendment to IEEE Std 802.3-201x"

Change the frontmatter headers from:

"IEEE 802.3bq 40GBASE-T Task Force" to:

"IEEE P802.3bq 40GBASE-T Task Force".

This can be done by changing the odd and even page headers in the Clause 1 file to say "201x", then with that file open, in the left hand pane highlight all of the other files in the book and use File, Import, Formats, Deselect All, Page layouts, Import.

Response Response Status C

ACCEPT.

CI 00 SC 0 P 3 L 13 # 253  
 Grow, Robert RMG Consulting

Comment Type E Comment Status A EZ

Typically this box uses the expected name of the standard with 201x year. (It would be helpful to the publication editor to be consistent in use of 201x or 20xx. Though we aren't very close to decade wrap, we will have to start using 20xx in a few years.

## SuggestedRemedy

Replace IEEE P802.3bq with IEEE Std 802.3bq-201x (or 20xx).

Response Response Status C

ACCEPT.

CI 00 SC 0 P 4 L 19 # 254  
 Grow, Robert RMG Consulting

Comment Type E Comment Status A EZ

Might want to add an editors note here for the publication editor to insert descriptions of any other amendments approved before or at the same SASB meeting (take text from the approved amendment front matter).

## SuggestedRemedy

See comment.

Response Response Status C

ACCEPT.

CI 00 SC 0 P 6 L 13 # 227  
 Booth, Brad Microsoft

Comment Type E Comment Status A EZ

I'm sure that there is a task force chair and an editor for this project whose names are not FirstName SecondName. :-)

## SuggestedRemedy

Add the name for the Task Force chair and editor. Also add the names of the 802.3 voters.

Response Response Status C

ACCEPT. Dup of comments 53, 211, 406

CI 00 SC 0 P 65 L 49 # 113  
 Cibula, Peter Intel Corporation

Comment Type E Comment Status A EZ

Punctuation - double periods/full stops at the end of various sentences. Locations include:  
 Page 65, Line 49  
 Page 66, Line 36  
 Page 67, Line 14  
 Page 76, Line 14  
 Page 172, Line 1

## SuggestedRemedy

Change the occurrences of "..." at the end of the sentences noted above to "."

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 01 SC 1.3 P 20 L 10 # 452  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A Cablingrefs

The base standard lists ISO/IEC 11801:2002 Amendment 1:2008 and Amendment 2:2010, but this draft lists ISO/IEC 11801-1 Edition 3. Is the latest an Amendment or an Edition?

## SuggestedRemedy

Check and correct if necessary.

Response Response Status W

ACCEPT IN PRINCIPLE.

Not to change. Edition 3 is an EDITION. It is the draft revision to ISO/IEC 11081:2002 that is in process reported in several liaison reports.

CI 01 SC 1.3 P 20 L 11 # 229  
Booth, Brad Microsoft

Comment Type T Comment Status R Cablingrefs

Reference to ISO/IEC specification is incorrect. This draft specification must reference an existing specification or draft specification, not a pending specification.

## SuggestedRemedy

Provide the correct reference.

Response Response Status C

REJECT.

Referenced document is a draft specification.

CI 01 SC 1.3 P 20 L 7 # 371  
Remoin, Duane Huawei Technologies

Comment Type ER Comment Status A Cablingrefs

Should not reference draft documents

## SuggestedRemedy

Add editors note that these two references will be updated before the end of sponsor ballot when the specifications are released.

Response Response Status W

ACCEPT IN PRINCIPLE.

Add editor's note to be included consistent with other IEEE copper standards pointing to ISO/IEC references e.g., 802.3ba. Editorial license to implement.

CI 01 SC 1.3 P 20 L 8 # 228  
Booth, Brad Microsoft

Comment Type TR Comment Status R Cablingrefs

Reference to ANSI specification is incorrect. This draft specification must reference an existing specification or draft specification, not a pending specification.

## SuggestedRemedy

Provide the correct reference.

Response Response Status W

REJECT.

Referenced document is a draft specification.

CI 01 SC 1.4 P 20 L 15 # 119  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Provide the information as to where in 1.4 the various new definitions should be inserted. Change the editing instruction accordingly

## SuggestedRemedy

Change:

"1.4.x 40GBASE-T:..." to: "1.4.72a 40GBASE-T:..."

"1.4.x Category 8.1 balanced ..." to "1.4.131a Category 8.1 balanced ..."

"1.4.x Category 8.2 balanced ..." to "1.4.131b Category 8.2 balanced ..."

Replace the single editing instruction: "Insert the following new definitions into the list, in alphanumerical order:" to:

"Insert the following new definition into the list after 1.4.72 40GBASE-SR4:" before 1.4.72a and:

"Insert the following new definitions into the list after 1.4.131 Category 7A balanced cabling:"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 01 SC 1.4 P 20 L 20 # 341  
Lusted, Kent Intel

Comment Type E Comment Status A Cablingrefs

The difference between the definition of Category 8.1 balanced cabling and Category 8.2 balanced cabling isn't obvious to the casual reader. It looks to me to be the same definition two times.

## SuggestedRemedy

Consider adding some text to each that helps the reader understand the difference between the two cablings.

Response Response Status C

ACCEPT IN PRINCIPLE.  
See comment#230

CI 01 SC 1.4 P 20 L 20 # 244  
HESS, DAVE CORD DATA

Comment Type ER Comment Status A Cablingrefs

Use correct references in definitions:  
"Category n" refers to a cabling component, whereas "Class N" refers to the cabling.

## SuggestedRemedy

change:  
"1.4.x Category 8.1 balanced cabling: Balanced 100 Ω cables and associated connecting hardware whose transmission characteristics are specified up to 2,000 MHz ..."  
to:  
"1.4.x Category 8.1 balanced cabling components: Balanced 100 Ω cables and associated connecting hardware, used in Class I cabling, whose transmission characteristics are specified up to 2,000 MHz ..."

Response Response Status C

ACCEPT IN PRINCIPLE.  
See comment #230.

CI 01 SC 1.4 P 20 L 20 # 475  
Thompson, Geoff GraCaSI S.A.

Comment Type ER Comment Status A Cablingrefs

The text: "Category 8.1" is incorrect

## SuggestedRemedy

Replace "Category 8.1" with "Category 8"

Response Response Status W

ACCEPT IN PRINCIPLE.

See comment#230

CI 01 SC 1.4 P 20 L 20 # 230  
Booth, Brad Microsoft

Comment Type TR Comment Status A Cablingrefs

Both Category 8.1 and 8.2 definitions have an editor's note stating that these definitions are forward-looking. There should not be any forward-looking definitions in the draft. The draft must only reference existing information in standards or draft standards.

## SuggestedRemedy

Correct these definitions to eliminate any requirement for the editor's note.

Response Response Status W

ACCEPT IN PRINCIPLE.

Delete definitions:  
1.4.x Category 8.1 balanced cabling:  
1.4.x Category 8.2 balanced cabling:

CI 01 SC 1.4 P 20 L 21 # 1  
Hajduczenia, Marek Bright House Networks

Comment Type T Comment Status A Format

It is not clear why we say "2,000 MHz" and not rather "2 GHz"

## SuggestedRemedy

Change "2,000 MHz" to "2 GHz" in line 21 and 30 in definition of Category 8.1 and Category 8.2. There is no reason to spell out MHz when the number in GHz is much more readable.

Response Response Status C

ACCEPT IN PRINCIPLE.  
2000 MHz is used for consistency with the cabling specifications  
Remove comma and write as 2 000 MHz per IEEE style guide.  
See comment 120

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 01 SC 1.4 P 20 L 26 # 407  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Editors notes on lines 26 and 35 should be marked as being removed prior to publication

## SuggestedRemedy

insert "(to be removed prior to publication)" after "Editor's Note" on lines 26 & 35.

Response Response Status C

ACCEPT.

CI 01 SC 1.4 P 20 L 27 # 238  
 HESS, DAVE CORD DATA

Comment Type E Comment Status A EZ

Some uses of "ISO" should be "ISO/IEC"

## SuggestedRemedy

replace "ISO" with "ISO/IEC"

Response Response Status C

ACCEPT.

CI 01 SC 1.4 P 20 L 29 # 476  
 Thompson, Geoff GraCaSI S.A.

Comment Type ER Comment Status A Cablingrefs

This entire paragraph is a duplicate of the text above and is unnecessary

## SuggestedRemedy

Remove paragraph and associated editor's note.

Response Response Status W

ACCEPT IN PRINCIPLE.

See comment#230.

CI 01 SC 1.4 P 20 L 29 # 245  
 HESS, DAVE CORD DATA

Comment Type ER Comment Status A Cablingrefs

Use correct references in definitions:

"category n" refers to a cabling component, whereas "class N" refers to the cabling.

## SuggestedRemedy

change:

"1.4.x Category 8.2 balanced cabling: Balanced 100 Ω cables and associated connecting hardware whose transmission characteristics are specified up to 2,000 MHz ..."

to:

"1.4.x Category 8.2 balanced cabling components: Balanced 100 Ω cables and associated connecting hardware, used in Class II cabling, whose transmission characteristics are specified up to 2,000 MHz ..."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment#230.

CI 01 SC 1.4 P 20 L 36 # 239  
 HESS, DAVE CORD DATA

Comment Type E Comment Status A EZ

Some uses of "ISO" should be "ISO/IEC"

## SuggestedRemedy

Replace "ISO" with "ISO/IEC"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 01 SC 1.4.x P 20 L 21 # 120  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The IEEE style manual includes:

13.3.2 Numerical values

Digits should be separated into groups of three, counting from the decimal point toward the left and right. The groups should be separated by a space, and not a comma, period, or dash. If the magnitude of the number is less than one, the decimal point should be preceded by a zero. In numbers of four digits, the space is not necessary, unless four-digit numbers are grouped in a column with numbers of five digits or more.

Consequently, "2,000 MHz" should be "2000 MHz" on line 21 and on line 30.

(Note, a comment has been submitted against 802.3bx D3.0 to remove the comma from 1.4.131)

Also, "Clause 55" should be a cross-reference rather than forest green text on line 23 and line 32.

## SuggestedRemedy

Change "2,000 MHz" to "2000 MHz" on line 21 and on line 30

Make "Clause 55" a cross-reference on line 23 and line 32

Response Response Status C

ACCEPT. See comment 1

CI 01 SC 1.4.x P 20 L 26 # 78  
 Mark, Laubach Broadcom Corporation

Comment Type ER Comment Status A Cablingrefs

Lines 26 and 34. These EN's aren't clear to me. Do they relate to the EN on Page 173 Line 46 about a future ISO/IEC document revision? Is this a warning that these definitions are going to be updated in the future or that they will become representative of TIA and ISO documents after some future date or documentation release? Will these EN's be removed prior to publication?

## SuggestedRemedy

Consider removal or update with "(to be removed prior to publication)" and fix clarity/purpose issues.

Response Response Status W

ACCEPT IN PRINCIPLE. See comments 478

CI 01 SC 1.5 P 20 L 38 # 231  
 Booth, Brad Microsoft

Comment Type E Comment Status A EZ

No abbreviations listed.

## SuggestedRemedy

Remove 1.5.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 121

CI 01 SC 1.5 P 20 L 40 # 121  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Either include some abbreviations to be added to 1.5 or remove it from the draft

## SuggestedRemedy

Either include some abbreviations to be added to 1.5 and remove:

ABBR expanded version

[abbreviations use paragraph tag AcrList,ac]

or remove 1.5 from the draft entirely

Response Response Status C

ACCEPT IN PRINCIPLE.

Add abbreviation to 1.5:

ACRF Attenuation to Crosstalk Ratio - Far End

Delete ABBR abbreviation.

CI 01 SC 1.5 P 20 L 41 # 419  
 Zimmerman, George CME Consulting

Comment Type ER Comment Status A Format

Abbreviation text is a placeholder. Abbreviations missing.

## SuggestedRemedy

Insert : "Editors Note (to be removed prior to publication): Abbreviations clause here is a placeholder for abbreviations new to this amendment to be added to IEEE Std. 802.3 - Commenters should comment on and flag new abbreviations to be added"

Replace "ABBR" abbreviation entry with:

"xGBASE-T BASE-T Ethernet PCS/PMA/PMDs with 1000Mbps or greater speed"

Response Response Status C

ACCEPT IN PRINCIPLE.

Insert editors note, delete the abbreviation ABBR, and add abbreviations as other comments require.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 1.2 P 72 L 10 # 57  
McDermott, Thomas Fujitsu

Comment Type ER Comment Status A PCS

Figure 113-1 does not show the RS-LPDC FEC PCS sublayer, as shown in figure 81-1 for 40GBASE-T.

## SuggestedRemedy

Revise figure 113-1 to include RS LDPC FEC PCS sublayer.

Response Response Status W

ACCEPT IN PRINCIPLE. Revise Figure 113-1 to show 40GBASE-T PCS  
See comment 332

CI 113 SC 113 P 71 L 1 # 347  
Lusted, Kent Intel

Comment Type ER Comment Status A EZ

The title "Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, Physical Medium Dependent (PMD) sublayer, and baseband medium, type 40GBASE-T" states that a PMD sublayer is present in the 40GBASE-T PHY.

However, no PMD is listed in the architectural diagram nor specified in the text of Clause 113.

Clause 55 title does not use PMD nor it PMD defined in the Clause 55 text

## SuggestedRemedy

Suggest updating the title to align with clause 55. Something like "Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer and baseband medium, type 40GBASE-T".

Also remove PMD reference in first and second paragraph of CI 113.1

Response Response Status W

ACCEPT.

CI 113 SC 113 P 71 L 24 # 122  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

There are many pieces of text in Clause 113 that are shown green that should be cross-references (for example "Clause 78" (2 instances) and "Clause 28" on page 71 and the five green items on page 73)

## SuggestedRemedy

Review every piece of green text in Clause 113 and convert those that exist in the draft to cross-references.

Response Response Status C

ACCEPT.

CI 113 SC 113 P 94 L 1 # 125  
Anslow, Pete Ciena

Comment Type ER Comment Status A Format

While many figures in Clause 113 appear to be editable, so are not. This makes life very difficult for the editors of the revision project when figures need to be changed. The IEEE style guide recommends a minimum font size in figures of 8pt. Some figures in Clause 113 have text with a much smaller size than this that is very difficult to read.

## SuggestedRemedy

Make all of the figures in Clause 113 (with the exception of figures illustrating equations such as Figure 113-38) editable in FrameMaker. This includes Figures 113-8, 113-10, and 113-14. Increase the font size of text in figures that is smaller than 8 pt.

Response Response Status W

ACCEPT IN PRINCIPLE.  
Editor to review figures for font sizes smaller than 8 pt. Editor to redraw figures as updated making them editable in FrameMaker.

CI 113 SC 113. P 96 L 36 # 76  
Mark, Laubach Broadcom Corporation

Comment Type E Comment Status A EZ

Looking in latest 802.3bx draft, I think the cross-reference should be to Figure 81-4.

## SuggestedRemedy

Correct crossref if needed.

Response Response Status C

ACCEPT IN PRINCIPLE.  
Figure is 82-4 in bx draft 3.0



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.1 P 71 L 13 # 385  
 Remein, Duane Huawei Technologies

Comment Type ER Comment Status A Cablingrefs

Is some augmentation specified in 113 not "appropriate"?

## SuggestedRemedy

Remove "appropriate"

Response Response Status W

ACCEPT IN PRINCIPLE.

Delete: with appropriate augmentation as specified in 113.7.

Remove period: Page 71 L12 between "cabling as"

CI 113 SC 113.1 P 71 L 13 # 214  
 Shariff, Masood CommScope

Comment Type E Comment Status A Cablingrefs

Addendum 1 is already encoded into the number ANSI/TIA-568-C.2-1 where -1 means addendum 1. Adding addendum to this implies and addendum to this addendum. Also added Category 8 to the title

## SuggestedRemedy

Change: Addendum 1: Specification for 100 ohm Category Cabling with appropriate augmentation as specified in 113.7.

To: Specification for 100 ohm Category 8 Cabling with appropriate augmentation as specified in 113.7.

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete

-201x Addendum 1: Specification for 100ohm Category Cabling

In sentence-Addendum 1: Specification for 100 ohm Category Cabling with appropriate augmentation as specified in 113.7.

CI 113 SC 113.1 P 71 L 13 # 64  
 Marris, Arthur Cadence

Comment Type E Comment Status A EZ

100ohm

## SuggestedRemedy

Use correct format for "100ohm"

Response Response Status C

ACCEPT. See comments 123 & 385

CI 113 SC 113.1 P 71 L 13 # 478  
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A Cabling

There is no category of cabling mentioned as being required, it would seem that the text should call out Category 8 cabling should be called out.

## SuggestedRemedy

Change the text: "category" in this line to "Category 8".

Response Response Status W

ACCEPT IN PRINCIPLE.

See comment#214

CI 113 SC 113.1 P 71 L 13 # 86  
 Maguire, Valerie Simon

Comment Type T Comment Status A Cablingrefs

Standards names and the publication date are not needed in body text if the document is referenced in the Bibliography.

## SuggestedRemedy

Delete, "-201x Addendum 1: Specification for 100ohm Category Cabling"

Response Response Status C

ACCEPT IN PRINCIPLE. See comment#214

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 113 SC 113.1 P 71 L 13 # 123  
 Anslow, Pete Ciena  
 Comment Type E Comment Status A EZ  
 "100ohm" should be "100", space, capital omega  
 SuggestedRemedy  
 Change "100ohm" to "100", space, capital omega  
 Response Response Status C  
 ACCEPT. See comment 385

Cl 113 SC 113.1 P 71 L 16 # 274  
 Hidaka, Yasuo Fujitsu Laboratories of  
 Comment Type E Comment Status A EZ  
 The phrase "the type 40GBASE-T PCS, 40GBASE-T PMA, type 40GBASE-T PMD sublayer" is redundant.  
 SuggestedRemedy  
 Change "the type 40GBASE-T PCS, 40GBASE-T PMA, type 40GBASE-T PMD sublayer" on line 16 with "the type 40GBASE-T PCS, PMA, and PMD sublayer".  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Change as commenter describes, except "sublayer" should be "sublayers", per comment 361.  
 Delete reference to PMD per comment 347 if it is accepted.

Cl 113 SC 113.1 P 71 L 17 # 275  
 Hidaka, Yasuo Fujitsu Laboratories of  
 Comment Type E Comment Status A EZ  
 The "the" before "PMD sublayer" on line 17 is not needed.  
 SuggestedRemedy  
 Remove "the" before "PMD sublayer" on line 17.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE. Delete reference to PMD sublayer in entirety if 347 is accepted.

Cl 113 SC 113.1 P 71 L 17 # 361  
 Remein, Duane Huawei Technologies  
 Comment Type E Comment Status A EZ  
 I believe these three things are plural  
 "Together, the PCS, PMA and the PMD sublayer"  
 SuggestedRemedy  
 Change "sublayer" to "sublayers"  
 Response Response Status C  
 ACCEPT. See comment 274

Cl 113 SC 113.1 P 71 L 20 # 65  
 Marris, Arthur Cadence  
 Comment Type TR Comment Status A EZ  
 No need to mention Clause 30 here.  
 SuggestedRemedy  
 Replace  
 "Management is specified in Clause 30."  
 With  
 "Management functions are optionally accessible through the management interface defined in Clause 45, or equivalent."  
 Response Response Status W  
 ACCEPT.  
 Text is consistent with Clause 55 but that is inconsistent with other 10G clauses. Commenter is encouraged to submit a maintenance request or comment on a revision draft to clause 55

Cl 113 SC 113.1 P 71 L 28 # 225  
 Booth, Brad Microsoft  
 Comment Type E Comment Status A EZ  
 Auto-negotiation is hyphenated.  
 SuggestedRemedy  
 Insert hyphen.  
 Response Response Status C  
 ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.1 P 71 L 8 # 384  
 Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

We finally get "CSMA/CD out of the standard title and yet we need it here?  
 Note that later clauses of Section 6 only use this phrase in the LAN Model figures.

**SuggestedRemedy**

Unless you can demonstrate Carrier Sense Multiple Access/Carrier Detect functionality strike this phrase.

Response Response Status W

ACCEPT.  
 Recommend commenter submit maintenance or similar comment to Clause 55 on revision draft

CI 113 SC 113.1 P 71 L 9 # 224  
 Booth, Brad Microsoft

Comment Type E Comment Status A EZ

Over-use of defining acronyms. PCS, PMA and PMD are defined in the title and don't need to be redefined in the first paragraph. IEEE editor may catch these also.

**SuggestedRemedy**

Review usage with editor and eliminate excessive definitions.

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Editor to review relative to existing IEEE Std. 802.3 style

CI 113 SC 113.1.1 P 71 L 31 # 457  
 Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A Format

We seem to have a new convention in the 802.3 WG of not including the project objectives in the amendment, so this subclause must be deleted.

**SuggestedRemedy**

Delete 113.1.1 Objectives.

Response Response Status W

ACCEPT.

CI 113 SC 113.1.1 P 71 L 31 # 483  
 Brown, Matt APM

Comment Type ER Comment Status A EZ

The objectives listed in this subclause are for the project, not for the PHY. In several recent amendments a similar objectives subclause has been removed from existing sub-clauses as the new project has new objectives and it becomes difficult to keep this list current and not included in new clauses. As an example see 802.3az (no project objectives in 78), 802.3bj (removed project objectives in 69.1.2), and 802.3by (deleted BASE-R FEC project objectives, replaced with summary, no objectives in Clause 105).

The clause should list what is supported, not what was intended (objectives = "something that one's efforts or actions are intended to attain or accomplish"). If a summary of the features is necessary these should be list as such, not as project objectives.

**SuggestedRemedy**

Remove sub-clause 113.1.1. Add a summary of functions if the text in 13.1 is not sufficient.

Response Response Status W

ACCEPT IN PRINCIPLE.

LATE COMMENT - TASK FORCE TO VOTE ON CONSIDERING

113.1.1 to be removed  
 See comment 457

CI 113 SC 113.1.1 P 71 L 31 # 2  
 Hajduczenia, Marek Bright House Networks

Comment Type TR Comment Status A Format

Objectives should not be listed anymore.

**SuggestedRemedy**

Remove 113.1.1 altogether - objectives are recored in project documentation and do not matter for definition of PHY.

Response Response Status W

ACCEPT. See comment 457

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 113 SC 113.1.1 P 71 L 31 # 124  
 Anslow, Pete Ciena

Comment Type E Comment Status A Format

Recent amendments to 802.3 (802.3bj, 802.3bm, 802.3bw, 802.3by) have not included the project objectives in the draft and have removed some that were already there.  
 See 69.1.2 and 80.1.2 in IEEE Std 802.3bj-2014.  
 See 96.1.1 in the compare version of P802.3bw D1.4.

*SuggestedRemedy*

Remove 113.1.1 entirely.

Response Response Status C

ACCEPT. See comment 457

Cl 113 SC 113.1.1 P 71 L 40 # 269  
 Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Clause 28 and 78 are amended by this draft and hence are not external cross-references.

*SuggestedRemedy*

Point the "Clause 28" and "Clause 78" text to the appropriate cross-reference markers.

This occurs several other times throughout the draft (other examples include but are not limited to 113.1, 113.1.3, 113.1.3.1, 113.2, 113.2.1, 113.2.1.2). It is suggested that the external cross-references in the draft be checked and updated as appropriate.

Response Response Status C

ACCEPT.

Cl 113 SC 113.1.2 P 72 L 7 # 66  
 Marris, Arthur Cadence

Comment Type TR Comment Status A EZ

XLGMII is never physically implemented.

*SuggestedRemedy*

Change

The 40GBASE-T PHY architecture specified in this standard is referenced to the XLGMII interface, it is recognized that the XLGMII interface need not be physically implemented. Chip to chip interfaces based on other IEEE defined 40Gb/s PCS/PMA combinations which translate to XLGMII may be used

To

The 40GBASE-T PHY service interface is the XLGMII, which is defined in Clause 81. The 40GBASE-T PHY may connect to the 40 Gb/s Attachment Unit Interface (XLAUI) defined in Annex 83B using the PCS defined in Clause 82.

Remove "\*\*XLGMII is optional" from Figure 113-1

Response Response Status W

ACCEPT.

Cl 113 SC 113.1.2 P 72 L 9 # 276  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

A period "." is missing.

*SuggestedRemedy*

Add a period "." at the end of line 9.

Response Response Status C

ACCEPT.

Cl 113 SC 113.1.3 P 72 L 42 # 362  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Is there some good reason to use 10000 Mb/s here rather than 10 Gb/s? It would certainly make the sentence more readable.

*SuggestedRemedy*

change 10000 Mb/s to 10 Gb/s

Response Response Status C

ACCEPT. Dup of comment 67

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl 113  
 SC 113.1.3

Page 12 of 97  
 5/26/2015 8:39:56 AM

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.1.3 P 72 L 42 # 484  
Brown, Matt APM

Comment Type ER Comment Status A EZ

Per style manual section 13.3.2 "10000" should be "10 000".  
Alternately, you can reduce the integer size by using "giga" instead of "mega".  
Also, it more common and more concise to use "baud" instead of "symbols per second".

*SuggestedRemedy*

Change "10000 Mb/s" to "10 000 Mb/s" or "10 Gb/s".  
Change "3200 Megasymbols per second" to "3 200 Megasymbols per second" or "3.2 Gigasamples per second" or "3.2 Gbaud".  
Use the same form throughout the clause (e.g., Figure 113-2).

Response Response Status W

ACCEPT IN PRINCIPLE.

LATE COMMENT - TASK FORCE TO VOTE ON CONSIDERING

Change format of 10000 to 10 Gb/s  
Change 3200 to 3 200  
(maintain Megasymbols per second)  
Editor to review clause to maintain consistency

CI 113 SC 113.1.3 P 72 L 42 # 67  
Marris, Arthur Cadence

Comment Type T Comment Status A EZ

Change "10000 Mb/s" to "10 Gb/s"

*SuggestedRemedy*

Change "10000 Mb/s" to "10 Gb/s"

Response Response Status C

ACCEPT. Dup of comment 362

CI 113 SC 113.1.3 P 72 L 45 # 279  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

Words "auxiliary channel bit" and "auxiliary bit" are used inconsistently.

*SuggestedRemedy*

Change "auxiliary channel bit" in the following locations with "auxiliary bit":

Page 72, line 45  
Page 76, line 15  
Page 76, line 19  
Page 90, line 46

Response Response Status C

ACCEPT.

Same usage occurs in Clause 55 - commenter may wish to file comments in revision or maintenance

CI 113 SC 113.1.3 P 72 L 52 # 458  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A PCS

Half of footnote 5 is useful information that should be moved into the body of the subclause, and the other half is tutorial information that should not be included in the standard.

*SuggestedRemedy*

Move the sentence "5The DSQ128 symbols are obtained by concatenating two time-adjacent 1D PAM16 symbols and retaining among the 256 possible Cartesian product combinations, 128 maximally spaced 2D symbols." into the body of the subclause immediately after "(double square 128)". Delete the remainder of the footnote.

Response Response Status C

ACCEPT IN PRINCIPLE.

Move the sentence "5The DSQ128 symbols... spaced 2D symbols." into the body of the subclause as suggested, and retain the remainder in the footnote.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 113 SC 113.1.3 P 73 L 19 # 277  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status R EEE  
"to signal an end to the LPI mode" seems wrong.

## SuggestedRemedy

Change "to signal an end to the LPI mode" on line 19 with  
"to signal an end of the LPI mode".

Response Response Status C

REJECT.  
Text is clear as is and is consistent with 802.3

CI 113 SC 113.1.3 P 75 L 24 # 363  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EEE  
What is the meaning of the dotted boxes in Figure 113-3?  
Same issue with Figure 113-4 pg 82, Figure 113-5 pg 89

## SuggestedRemedy

Explain what these boxes mean or remove.

Response Response Status C

ACCEPT IN PRINCIPLE.  
Note 2 explains these are only used if EEE or fast retrain options are enabled.  
Insert text at end of Note 2:  
"These are indicated by dotted boxes".

CI 113 SC 113.1.3 P 75 L 45 # 398  
Remein, Duane Huawei Technologies

Comment Type T Comment Status R EZ  
In Figure 113-3 Note 1 refers to a "recovered\_clock arc". Is this synonymous with the  
recovered\_clock signal?

## SuggestedRemedy

Change "recovered\_clock arc" to "recovered\_clock signal"

Response Response Status C

REJECT. The meaning may be interpreted as same, but arc properly indicates the line on the  
diagram, whereas signal connotes electrical properties.

CI 113 SC 113.1.3.1 P 76 L 1 # 68  
Marris, Arthur Cadence

Comment Type ER Comment Status A EZ  
Heading depth wrong.

## SuggestedRemedy

Promote to heading 2:  
113.2 Physical Coding Sublayer (PCS)

Consider promoting "113.1.3 Operation of 40GBASE-T"

Consider restructuring document to remove split between PCS description in the overview and  
later in the document.

Response Response Status W

ACCEPT IN PRINCIPLE.  
Change headings to read "Summary of Physical Coding Sublayer" so as not to be confused  
with 113.3 which specifies the PCS  
do similar change to other 113.1.3.x titles

CI 113 SC 113.1.3.1 P 76 L 27 # 459  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A PCS  
In this paragraph we find a repetition of the text that appeared in footnote 5 on page 72. The last  
sentence of this paragraph is tutorial in nature and does not belong in the standard.

## SuggestedRemedy

Delete the sentence: "The resulting  
checkerboard constellation is based on a lattice called RZ2 in the literature (see Forney [B31])."

Response Response Status C

ACCEPT IN PRINCIPLE.  
Move the sentence "The resulting..." to a footnote.

CI 113 SC 113.1.3.1 P 76 L 4 # 364  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ  
Clause 81 cross reference should be live (CI 81 is included in the draft) and not forest green.  
Same issue for pg 76 ln 44

## SuggestedRemedy

Per Comment

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.1.4 P 78 L 49 # 365  
 Remoin, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Why are you using an indirect cross reference here.  
 "See the PCS reference diagram in 113.2."

## SuggestedRemedy

Change to "see Figure 113–5"

Response Response Status C

ACCEPT.

CI 113 SC 113.11 P 185 L 46 # 237  
 Brown, Thomas Vitesse Semiconductor

Comment Type E Comment Status R MGMT

The sum of transmit and receive delays .... shall not exceed 25 600 BT.

The number of BT's of delay should be specified as one number.

## SuggestedRemedy

Correct the sum of transmit and receive delays by specifying one number of BT.

Response Response Status C

REJECT. Practice is consistent with 10GBASE-T Phys and allows for implementation flexibility.

CI 113 SC 113.12 P 186 L 2 # 130  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The text after "Clause 113" in the title of 113.12 should match the Clause 113 title.

## SuggestedRemedy

Change:  
 "Protocol implementation conformance statement (PICS) proforma for Clause 113—Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer and baseband medium, type 40GBASE-T" to:  
 "Protocol implementation conformance statement (PICS) proforma for Clause 113—Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, Physical Medium Dependent (PMD) sublayer, and baseband medium, type 40GBASE-T"

Response Response Status C

ACCEPT.

CI 113 SC 113.12.1.2 P 187 L 20 # 308  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

"Clause 98" should be "Clause 113".

## SuggestedRemedy

Change "Clause 98" on line 20, page 187 with "Clause 113".

Response Response Status C

ACCEPT.

CI 113 SC 113.12.2 P 187 L 37 # 98  
 McClellan, Brett Marvell

Comment Type TR Comment Status A EZ

Loop timing is required, not an option. There is no need to list loop timing under Major capabilities/options. Also several PIC line items need to be corrected.

## SuggestedRemedy

delete row "\*\*LT Support of loop timing"

page 155 line 16  
 loop timing is required  
 delete "(if loop timing is supported)"  
 page 159 line 16  
 delete "For a PHY that can operate in loop timing mode,"  
 page 172 line 40  
 delete "and both devices have the same loop timing support,"  
 page 173 line 15  
 delete "and identical loop timing support"  
 page 193 line 21  
 delete rows containing MF9 and MF10  
 page 194 line 43  
 delete "Applicable only if loop timing is supported"

Response Response Status W

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.12.2 P 187 L 37 # 132  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

\*LT Support of loop timing is mandatory, so there shouldn't be a "No [ ]" box

## SuggestedRemedy

Remove the "No { }"

Response Response Status C

ACCEPT.

CI 113 SC 113.2 P 186 L 10 # 131  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The tables that should be on the first page of the PICS have moved to page 187

## SuggestedRemedy

Move the tables down to the "Date of Statement" row back on to page 186.  
 (It may be that "Keep With Next Pgf" is checked for the heading 113.12.1.2 Protocol summary.  
 If so, uncheck it (you have to click the check mark twice) and if may fix this.)

Response Response Status C

ACCEPT.

CI 113 SC 113.2.1.2.1 P 80 L 28 # 485  
 Brown, Matt APM

Comment Type T Comment Status A EZ

If "READY" is not used for 40GBASE-T why is it listed in the 40GBASE-T clause?

## SuggestedRemedy

Remove READY from the sentence on line 25.  
 Remove READY and description from the list on line 28.

Response Response Status C

ACCEPT. Dup of comment 71

CI 113 SC 113.2.1.2.1 P 80 L 28 # 71  
 Slavick, Jeff Avago Technologies

Comment Type TR Comment Status A EZ

PMA\_LINK.indication(link\_status) states that READY is a value it can take on. But then states that READY is not used by 40GBASE-T

## SuggestedRemedy

Removed READY from the list of values link\_status can PMA\_LINK.indication can take on.

Response Response Status W

ACCEPT. See comment 485 for a complete remedy

CI 113 SC 113.2.2.4.2 P 85 L 4 # 278  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

800 MHz is probably incorrect.

## SuggestedRemedy

Change "800 MHz" with "3.2 GHz".

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.15 P 98 L 24 # 282  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A PCS

The second and third statements "A single XLGMII data transfers is encoded into each block. It takes 256 PMA\_UNITDATA transfers to send an LDPC frame of data." in the paragraph do not describe the transmit process well.

## SuggestedRemedy

Change the second and third statements of the paragraph with the following:

50 XLGMII data transfers are encoded into an RS-LDPC frame.  
 It takes 256 PMA\_UNITDATA transfers to send an RS-LDPC frame of data.

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Change to read, "50 XLGMII data transfers are encoded into an LDPC frame.  
 It takes 256 PMA\_UNITDATA transfers to send an LDPC frame of data."

(note the term LPDC frame is used throughout both Clause 55 and draft clause 113 to represent the framing structure including the uncoded or RS-FEC coded bits)



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 113 SC 113.3.2.2.15 P 98 L 26 # 283  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A PCS

The ratio of transfer rates should be "25:128".

## SuggestedRemedy

Change "25:64" on line 26, page 98 with "25:128".

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 100 L 17 # 287  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

")" is used where "}" should be used.

## SuggestedRemedy

Change ")" in the following locations with "}":

Page 100, line 17  
Page 100, line 31  
Page 100, line 40

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 100 L 3 # 286  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Header row is missing in Table 113-3 in page 100.  
Texts are not at the center in Table 113-3 in page 100.

## SuggestedRemedy

Add a header row to Table 113-3 in page 100.  
Center the texts for both of left and right column of Table 113-3 in page 100.

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 101 L 1 # 438  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Clean up figure 113-10, removing visible edges of boxes.

## SuggestedRemedy

Clean up figure.

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 98 L 38 # 284  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

There are eight 65-bit blocks.

## SuggestedRemedy

Change "four 65-bit blocks" on line 38, page 98 with "eight 65-bit blocks".

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 98 L 41 # 285  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

"tx\_coded<512:0>" on line 41 should be "tx\_xcoded<512:0>".

## SuggestedRemedy

Change "tx\_coded<512:0>" on line 41, page 98 with "tx\_xcoded<512:0>".

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 98 L 51 # 342  
Lusted, Kent Intel

Comment Type E Comment Status A EZ

There is a red letter "5". I think it should be black text per the IEEE style guide.

## SuggestedRemedy

Fix if necessary

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 113 SC 113.3.2.2.16 P 98 L 51 # 270  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Red font appears in "65-bit".

## SuggestedRemedy

Revert to default font color (black).

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 99 L 24 # 127  
Anslow, Pete Ciena

Comment Type T Comment Status A EZ

Table 113-2 has no heading row to clarify what the columns contain

## SuggestedRemedy

Add an appropriate heading row

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.16 P 99 L 41 # 128  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Table 113-3 is not formatted correctly.

The heading row does not have the correct format (is it actually a body row?)

The part of Table 113-3 that is on page 100 should have (continued) in italic font at the end of the title.

The rows are centred on page 99, but left aligned on page 100

## SuggestedRemedy

Correct the formatting of the heading row.

Place the cursor at the end of table title on page 99. Then click on the Variables Tab and insert "Table Continuation" variable. This will add the (continued) on page 100.

Make all rows centred.

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.18 P 102 L 43 # 288  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

A period "." is missing.

## SuggestedRemedy

Add a period "." at the end of line 43, page 102.

Response Response Status C

ACCEPT.

CI 113 SC 113.3.2.2.20 P 103 L 20 # 289  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

The number above "PI" symbol is not readable in equation (113-3).

## SuggestedRemedy

Make the number above "PI" symbol to be read as "5" in equation (113-3).

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 226

CI 113 SC 113.3.2.2.20 P 103 L 20 # 226  
Booth, Brad Microsoft

Comment Type E Comment Status A EZ

Equation 113-3 is chopped.

## SuggestedRemedy

Fix.

Response Response Status C

ACCEPT. See comment 289

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

Cl 113 SC 113.3.2.2.20 P 103 L 21 # 290  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

The coefficient g<sub>6</sub> of x<sup>6</sup> is missing in equation (113-3).

It is not necessary, because g<sub>6</sub> is always 1.

However, it is recommended to include for consistency with figure 113-12.

## SuggestedRemedy

Add coefficient g<sub>6</sub> in front of x<sup>6</sup> in equation (113-3).

Response Response Status C

ACCEPT.

Cl 113 SC 113.3.2.2.20 P 103 L 36 # 291  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

") is used where ">" should be used.

## SuggestedRemedy

Change "<(185-i)8 + j)" with "<(185-i)8 + j>".

Response Response Status C

ACCEPT.

Cl 113 SC 113.3.2.2.20 P 103 L 45 # 129  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

"zeroes" should be "zeros"  
(See [http://www.ieee802.org/3/WG\\_tools/editorial/requirements/words.html](http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html))

## SuggestedRemedy

change "zeroes" to "zeros"

Response Response Status C

ACCEPT.

Cl 113 SC 113.3.2.2.21 P 105 L 24 # 292  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

A white space is missing between "output)" and "LDPC-coded bits" on line 24, page 105.

## SuggestedRemedy

Add a white space between "output)" and "LDPC-coded bits" on line 24, page 105.

Response Response Status C

ACCEPT.

Cl 113 SC 113.3.2.2.23 P 106 L 31 # 439  
Zimmerman, George CME Consulting

Comment Type E Comment Status A PCS

References to LDPC framer blocks of purely 65B blocks should now be mixed 512B and 65B blocks.

## SuggestedRemedy

Rename 65B-LDPC framer to block-LDPC framer in 113.3.2.2.23 title & paragraph

Change: "betewen the 65-bit width of the 65B blocks and the 4D-PAM16" to

"between the mixed 513B and 65B blocks and the 4D-PAM16" (line 31)

Change "entirely of 64B/65B LDPC-encoded LP\_IDLE" to "entirely of RS-LDPC encoded LP\_IDLE" (line 50, cl. 113.3.2.2.24)

Change "64B/65B encoding technique" to "mixed 512B/513B 64B/65B RS-LDPC encoding used in normal data mode"(p. 130, line 52, cl. 113.4.2.2.1)

Response Response Status C

ACCEPT IN PRINCIPLE.

Rename 65B-LDPC framer to block-LDPC framer in 113.3.2.2.23 title & paragraph

Change: "betewen the 65-bit width of the 65B blocks and the 4D-PAM16" to

"between the mixed 513B and 65B blocks and the 4D-PAM16" (line 31)

Change "entirely of 64B/65B LDPC-encoded LP\_IDLE" to "entirely of RS-FEC and LDPC encoded LP\_IDLE" (line 50, cl. 113.3.2.2.24)

Change "64B/65B encoding technique" to "mixed 512B/513B 64B/65B RS-FEC and LDPC encoding used in normal data mode"(p. 130, line 52, cl. 113.4.2.2.1)

(see comment 332)

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 113 SC 113.3.2.2.5 P 92 L 28 # 280  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

There is a meaningless mark above "Note: zero-pad replaced with random bits for transmission" in Figure 113-6 around line 28, page 92.

## SuggestedRemedy

Remove the mark above the note in Figure 113-6.

Response Response Status C  
ACCEPT.

CI 113 SC 113.3.2.2.5 P 94 L 3 # 437  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Clean up format of figure 113-8, including aligning with text to show first encoding in 64/65b frames, then 512/513b transcoding, aligning boxes and lines, and pointing to RS parity bits

## SuggestedRemedy

Redraw figure with suggested corrections.

Response Response Status C  
ACCEPT.

CI 113 SC 113.3.2.2.5 P 94 L 30 # 281  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Lower left part of Figure 113-8 is blurred.

## SuggestedRemedy

Use a higher resolution to import the lower left part of Figure 113-8.

Response Response Status C  
ACCEPT IN PRINCIPLE. Editor to redraw and generally clean up figure 113-8. See comments 125 and 437

CI 113 SC 113.3.2.2.5 P 95 L 7 # 77  
Mark, Laubach Broadcom Corporation

Comment Type E Comment Status A PCS

Regarding "Editor's Note (to be removed prior to publication): Figure 113-9 shows the full set of 32 bit block alignments n the anticipation of updating the document to include a 25Gbps rate which may be 32 bit aligned.". First "n" should be "in". Second, is there any technical impact on this specification if Figure 113-9 is left as is and then remove this EN?

## SuggestedRemedy

Remove EN if possible.

Response Response Status C

ACCEPT IN PRINCIPLE.

Fix 'n' to "in".

Purpose of note is to avoid comments deleting extra block alignments until 25GBASE-T PAR is resolved. EN to be removed at that time.

CI 113 SC 113.3.2.2.8 P 96 L 33 # 126  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The note is not formatted correctly.

"40Gbps" should be "40 Gb/s"

"zeroes" should be "zeros"

(See [http://www.ieee802.org/3/WG\\_tools/editorial/requirements/words.html](http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html))

"Transmission" should be "transmission"

"64 bit alignment" should be "64-bit alignment"

## SuggestedRemedy

Change "Note: " to "NOTE—" where "—" is an em dash (Ctrl-q Shft-q).

Apply the paragraph Tag "Note" (9 pt font).

Change:

"For 40Gbps Transmission, 64 bit alignment ..." to:

"For 40 Gb/s transmission, 64-bit alignment ..."

Change "zeroes" to "zeros"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.3.2.3 P 108 L 37 # 295  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EEE

7 LDPC frames is not consistent with 6 LDPC frames on line 51, page 106.  
lpi\_tx\_sleep\_timer also has duration of 6 LDPC frame periods.

## SuggestedRemedy

Change "7 LDPC frames" with "6 LDPC frames" on line 37, page 108.

Response Response Status C

ACCEPT.  
SLEEP was changed to 6 LDPC frame periods in adoption of graba\_3bq\_01\_0714.pdf

CI 113 SC 113.3.2.3 P 108 L 8 # 293  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A PCS

The statement "One XLGMII data transfer is decoded from each block." does not describe the PCS receive function well.

## SuggestedRemedy

Change the statement "One XLGMII data transfer is decoded from each block." with the following:

50 XLGMII data transfers are decoded from one RS-LDPC frame.

Response Response Status C

ACCEPT IN PRINCIPLE.  
50 XLGMII data transfers are decoded from one LDPC frame.

Editor to check correct nomenclature for LDPC frame.

CI 113 SC 113.3.2.3 P 108 L 9 # 294  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ

The XLGMII and PMA sublayer data rate ratio should be 25:128.

## SuggestedRemedy

Change "25:64" on line 9, page 108 with "25:128".

Response Response Status C

ACCEPT.

CI 113 SC 113.3.4 P 110 L 12 # 93  
McClellan, Brett Marvell

Comment Type TR Comment Status R Training

The optional periodic training sequence in this text is identical to the 10GBASE-T periodic training that was added to Clause 55 based on a vendor proposal:  
[http://www.ieee802.org/3/an/public/nov04/ungerboeck\\_1\\_1104.pdf](http://www.ieee802.org/3/an/public/nov04/ungerboeck_1_1104.pdf) slide 23  
However, the same vendor recently reported that the periodic training sequence is not used by any 10GBASE-T device and is not suitable for adapting equalizer and canceller coefficients.  
[http://www.ieee802.org/3/bq/public/jul14/souvignier\\_3bq\\_01\\_0714.pdf](http://www.ieee802.org/3/bq/public/jul14/souvignier_3bq_01_0714.pdf) slide 3  
If requested by the link partner a local device is required to transmit the periodic training sequence resulting in poor adaptation of echo and NEXT cancellers at the local device.  
Further, 10GBASE-T and 40GBASE-T share one advertisement bit for the periodic training request from the link partner. Since 10GBASE-T PHY's cannot work with the periodic training, a 10G/40G capable PHY will never advertise the periodic training.

## SuggestedRemedy

Eliminate the optional periodic training sequence.

113.3.4 PMA training side-stream scrambler polynomials  
remove text:

"Moreover during Auto-Negotiation each transceiver may request the remote transceiver to reinitialize the values of its scrambler state after every 16384 symbol periods, to generate a periodically repeating pattern with repetition period 16384. The initial 33-bit values of the scrambler state shall be generated by combining 0x39A422 for the 22 MSBs and random value SB10-SB0 from Table 113-20 generated by the local device for the 11 LSBs as shown in Figure 113-14."

Figure 113-14

remove text from "n mod 16384 = 0" through "else:"

113.3.5.3 Refresh period signaling

delete the text:

"The training sequence without periodic reinitialization described in 113.3.4 shall be used during the LPI mode, with the scramblers free-running starting in the state PMA\_PBO\_Exch. If scrambler reinitialization is used for normal training, it shall be disabled and the scramblers shall begin free-running when the PHY Control state diagram is in the state PMA\_PBO\_Exch and the receiver detects a valid requested transmitter PBO setting (Oct 7 Valid<7> equal to 1)."

113.4.2.5.15 page 141 line 15

change "The training sequence without periodic re-initialization described in 113.3.4 shall be used

during fast retraining, with the scramblers free-running from PCS Reset. If scrambler re-initialization is used for normal training, it shall be disabled and the scramblers shall begin free-running when the PHY Control state diagram enters the PCS\_Test state and the variable fr\_active is FALSE."

to "The training sequence in 113.3.4 shall be used during fast retraining, with the scramblers free-running from PCS Reset."

113.6.1 Support for Auto-Negotiation

# Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

page 168 line 38 delete item c)

Table 113-20 in row U20 change text from "LD PMA training reset request" to either "10GBASE-T LD PMA training reset request" or "This bit is not defined for 10GBASE-T but reserved for future use." depending on resolution to comment on 10GBASE-T periodic training.

113.12.3 Physical Coding Sublayer (PCS)

delete the line items:

PCT19 PMA training scrambler reset

PCT31 Disable scrambler reinitialization

under "PCT30 LPI scrambler" delete the text:

"The training sequence without periodic re-initialization described in 113.3.5 shall be used"

*Response* *Response Status* **W**

REJECT.

See comment 84.

Periodic training sequence for 40GBASE-T was modified during d1.1.1 comment resolution to address issues with 10GBASE-T periodic training.

*Cl* **113** *SC* **113.3.5.3** *P* **114** *L* **39** *#* **370**

Remein, Duane Huawei Technologies

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

Apparently October is a very important month for 40G Eth. (does it work during Nov-Sep too?) :- )

So I see 51 instance of this undefined abbreviation of Octet. Surely 102 characters won't break the bank and cause an overdraft of characters!

*SuggestedRemedy*

Change all 51 instance of "Oct" to Octet

There are a few instance of "octet Oct" (ex pg 134 Ln 50, pg 134 Ln 17, 26, & 35) which could probably be shortened to Octet

*Response* *Response Status* **C**

ACCEPT.

Commenter may consider this text is also in Clause 55 on revisions of 802.3

And thank you for the laugh after 100 comments on missing or double periods.

*Cl* **113** *SC* **113.3.6.2** *P* **115** *L* **20** *#* **386**

Remein, Duane

Huawei Technologies

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

Constants, variables and functions should be using paragraph tag (style) DefinitionList

"For the lists of constants, variables, functions, counters, timers, etc. use the Paragraph Tag DefinitionList."

*SuggestedRemedy*

Use the proper paragraph styles per the current template.

*Response* *Response Status* **W**

ACCEPT.

Editor to review draft for proper paragraph styles prior to publication.

*Cl* **113** *SC* **113.3.6.2.1** *P* **115** *L* **24** *#* **422**

Zimmerman, George

CME Consulting

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

blocks don't go to LDPC encoder anymore, now they go to the transcoder and framer first

*SuggestedRemedy*

Change "to the LDPC encoder" to "to the 512B/513B transcoder and block-LDPC framer" (or 65B-LDPC framer if previous comment on 113.3.2.2.23 is not accepted) - in 4 places, EBLOCK\_T, LBLOCK\_T, LPBLOCK\_T, IBLOCK\_T

*Response* *Response Status* **C**

ACCEPT.

*Cl* **113** *SC* **113.3.6.2.2** *P* **117** *L* **31** *#* **296**

Hidaka, Yasuo

Fujitsu Laboratories of

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

Indentation is not correct for line 31 through line 38 in page 117.

*SuggestedRemedy*

Add the following indentation:

One level to line 31, page 117.

Two levels to line 33, page 117.

Three levels to line 35 through 38, page 117.

*Response* *Response Status* **C**

ACCEPT. See comment 481

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 113 SC 113.3.6.2.2 P 117 L 31 # 481  
Zhang, Jin Marvell

Comment Type ER Comment Status A EZ

The indentation for fr\_sigtype does not match other variables.

*SuggestedRemedy*

Indent fr\_sigtype and its definition as per the other variables.

Response Response Status W

ACCEPT IN PRINCIPLE. See comment 296 for more detailed remedy

CI 113 SC 113.3.6.2.3 P 117 L 44 # 387  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

Stray colon:  
"lfer\_timer:"  
^

This appears to be a common error through the draft; some counters have the colon some do not.

*SuggestedRemedy*

Strike all stray colons  
Regardless of the accepted remedy be consistent throughout the draft.

Response Response Status W

ACCEPT.

CI 113 SC 113.3.6.4 P 123 L 27 # 460  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A EEE

In Figure 113-17 there is a entry tag "E" into the state TX\_E, but I can't find an exit tag "E" in either part a or part b of the state diagram. (I note that there is an "E" exit tag in part b of the receive diagram.)

*SuggestedRemedy*

Remove the tag "E" from the entry conditions to the state TX\_E in Figure 113-17.

Response Response Status W

ACCEPT.  
Commenter may wish to pursue comment as maintenance to Clause 55 or as a comment on 802.3bx. This appears to have been introduced in 802.3az-2010, and gone unnoticed until now.

CI 113 SC 113.3.6.4 P 125 L 1 # 462  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A Format

My sympathies to the editor who drew the state diagrams. I know it isn't easy. I observe that the state diagrams look somewhat crowded, with transition conditions overlapping arcs. I think that the diagrams would benefit from being expanded in both dimensions to reduce crowding.

*SuggestedRemedy*

Expand state diagrams in both dimensions to reduce crowding.

Response Response Status W

ACCEPT IN PRINCIPLE.  
Editor to review diagram to expand vertically but keep within a single page.

Note that state diagrams are consistent with style and density of 802.3 standard in other clauses. These particular state diagrams are identical to those in clause 55, and are less crowded than others in IEEE Std. 802.3

CI 113 SC 113.3.6.4 P 125 L 34 # 461  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A Format

In Figure 113-19, two of the arcs exiting from the RX\_E state are missing a space in "C+". In fact, this whole state diagram has several instances where a space is missing between an operator and operand. Look for "C+" and "T\*".

*SuggestedRemedy*

Look for "C+" and "T\*" and change to "C +" and "T \*".

Response Response Status W

ACCEPT.  
Figure is identical to that in clause 55 - commenter may wish to file maintenance or comments on revision currently in process

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.3.7.2 P 123 L 17 # 367  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Misc issues in Figure 113-17

- 1) There appear to be two different dashed boxes, I assume there only one is intended.
- 2) Transition from TX\_C to TX\_D does not connect to TX\_C state.
- 3) Dashed line below TX\_E (around T\_TYPE(tx\_raw)=LI) crosses state transition T\_TYPE(tx\_raw) = (E + S).

## SuggestedRemedy

- 1) Use the same pen for all dashed boxes
  - 2) Connect the line
  - 3) omit the extended leg up from the dashed box (use a simple rectangle)
- While not required it might be easier to read the transition states out of TX\_E if the exit paths ran horizontally for a bit and conditions were all above the lines as is done for (T\_TYPE(tx\_raw) = LI) exiting TX\_T state.

Response Response Status C

ACCEPT. See comment 297

CI 113 SC 113.3.7.2 P 123 L 19 # 297  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Dashed lines in Figure 113-17 at the middle left and the bottom left are inconsistent with the bottom right and not clear.

## SuggestedRemedy

Use the same dashed line at the middle left and the bottom left in Figure 113-17 ad the bottom right.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 367 for more complete remedy

CI 113 SC 113.3.7.2 P 124 L 20 # 399  
 Remein, Duane Huawei Technologies

Comment Type T Comment Status A Format

Exit condition from TX\_L, T\_TYPE(tx\_raw) = (C + D + E + S + T ) is different from the exit state tx\_lpi\_active. These lines should not be connected.

## SuggestedRemedy

Redraw loop tx\_lpi\_active line so it does not connect to the exit transition from TX\_L

Response Response Status C

ACCEPT.

CI 113 SC 113.3.7.2 P 126 L 40 # 368  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EEE

Figure 113-20, Figure 113-21, Figure 113-33 have no dashed line while Figure 113-18 does. All are only for EEE. Presentation should be consistent

## SuggestedRemedy

Add a dashed box to Figure 113-20, Figure 113-21, & Figure 113-33

Response Response Status C

ACCEPT. Figurs are identical to that in clause 55 - commenter may wish to file maintenance or comments on revision currently in process

CI 113 SC 113.4.2.2 P 129 L 45 # 369  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

No reason this cannot be a live reference "45.2.1.7.4"

## SuggestedRemedy

Make live and remove forest green

Response Response Status C

ACCEPT.

CI 113 SC 113.4.2.5 P 134 L 26 # 106  
 Lo, William Marvell Semiconductor

Comment Type TR Comment Status A EEE

Figure 113-26 LPI Disable Time

There is no text to describe this variable.

Page 115 line 2 references this but does not contain sufficient details.

There should at least be some description specifying the PCS behavior when host concurrently exits and re-enters LPI while the LPI disable mechanism is active

## SuggestedRemedy

Propose deletion of this feature as detailed behavior is not specified.

- 1) Change LPI Disable Time in Figure 113-26 back to reserved
- 2) Delete "with the exception that the InfoField consists of a sequence of 128 zeros except when the PHY wishes to signal the link partner to leave LPI mode. " in line 33-34 page 114.
- 3) Delete lines 1, 2, 3 page 115.

Response Response Status C

ACCEPT.



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.4.2.5.13 P 138 L 1 # 463  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status A Format

In Figure 113-18 there are several polylines that have an arrowhead in between the beginning and the end of the polyline, because they were drawn as a series of individual line segments.

*SuggestedRemedy*

Remove the extraneous arrowheads by either changing the end style or redrawing as polylines.

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor believe that commenter means Figure 113-28, based on page and description.

CI 113 SC 113.4.2.5.15 P 141 L 5 # 94  
McClellan, Brett Marvell

Comment Type TR Comment Status A Training

The current text for fast retrain has the THP enabled during the PMA\_Coeff\_Exch state. During normal link training, the THP is bypassed in PMA\_Coeff\_Exch state enabling the receiver to determine the optimal DFE/THP for the link conditions. Allowing the local device to request the link partner to bypass the THP during fast retrain in the PMA\_Coeff\_Exch state will enable the receiver to determine the optimal DFE/THP for the link conditions.

*SuggestedRemedy*

change "After completing the link failure signal the PHY shall transition to the PMA\_Coeff\_Exch state, keep its THP turned on with its previously exchanged coefficients, and send PAM2 signaling within a time period equivalent to 9 LDPC frame periods."

to "After completing the link failure signal the PHY shall transition to the PMA\_Coeff\_Exch state. If the link partner requested THP bypass during fast retrain the PHY will bypass the THP ( or set THP coefficients to zero) during the PMA\_Coeff\_Exchstate state. Otherwise the PHY will keep its THP turned on with its previously exchanged coefficients, and send PAM2 signaling within a time period equivalent to 9 LDPC frame periods."

Response Response Status W

ACCEPT IN PRINCIPLE.

Commenter to provide text to implement a link partner to requesting THP bypass.

note - provided by comment 92

CI 113 SC 113.4.2.5.6 P 136 L 5 # 298  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The right most column of Table 113-10 is narrow to fit the header row in two lines.

*SuggestedRemedy*

Increase the width of the right most column of Table 113-10.

Response Response Status C

ACCEPT.

CI 113 SC 113.4.5.1 P 145 L 30 # 464  
Dai, Shaoan Marvell

Comment Type TR Comment Status A PMA

Missing a definition for pma\_reset which appears in Fig 113-29.

*SuggestedRemedy*

Insert the following definition:

"pma\_reset

Allows reset of the PHY Control and Link Monitor state diagrams.

Values: ON or OFF"

Response Response Status W

ACCEPT.

Correction was made during 802.3bx WG balloting to Clause 55.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 113 SC 113.4.5.11 P 166 L 36 # 218  
 Shariff, Masood CommScope

Comment Type T Comment Status A Cabling

Delay skew does not match Category 8 specs in draft 3.1

**SuggestedRemedy**

Change: shall not exceed 2.9 ns at all frequencies from 2 MHz to 2000 MHz. It is a further functional requirement that, once installed, the skew between any two of the four duplex channels due to environmental conditions shall not vary more than 3 ns within the above requirement.

To: shall not exceed 4.8 ns at all frequencies from 2 MHz to 2000 MHz. It is a further functional requirement that, once installed, the skew between any two of the four duplex channels due to environmental conditions shall not vary more than 0.5 ns within the above requirement.

The value 4.8 is calculated as follows:  $13.5 \times 5/30 + 2 \times 1.25 = 4.8$

Response Response Status C

ACCEPT.

To: shall not exceed 4.8 ns at all frequencies from 2 MHz to 2000 MHz. It is a further functional requirement that, once installed, the skew between any two of the four duplex channels due to environmental conditions shall not vary more than 0.5 ns within the above requirement.

Cl 113 SC 113.4.6.1 P 149 L 37 # 442  
 Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A Format

In Figure 113-29, all arcs must enter the top of the state and exit from the bottom of the state, but this was not done for the state PMA\_INIT\_FR.

**SuggestedRemedy**

Change the arcs so that they enter the top and exit from the bottom of the state PMA\_INIT\_FR.

Response Response Status W

ACCEPT.

Figure is identical to that in clause 55, as well as similar in style to many updated at the same time in 802.3az (Clause 78) - commenter may wish to file maintenance or comments on revision currently in process

Cl 113 SC 113.4.6.1 P 149 L 50 # 443  
 Frazier, Howard Broadcom Corporation

Comment Type E Comment Status A Format

In Figure 113-29, the state diagram has instances where a space is missing between an operator and operand.

**SuggestedRemedy**

Look for "minwait\_timer\_done\*" and change to "minwait\_timer\_done \*".

Response Response Status C

ACCEPT.

Cl 113 SC 113.4.6.1 P 149 L 8 # 441  
 Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A Format

In Figure 113-29, the entry tag "I" should not appear on the arc going from the PCS\_Data state to the INIT\_MAXWAIT\_TIMER state but must instead have it's own arc that goes directly into the top of the INIT\_MAXWAIT\_TIMER state. I realize that this is a crowded diagram.

**SuggestedRemedy**

Give the entry tag "I" its own arc into INIT\_MAXWAIT\_TIMER.

Response Response Status W

ACCEPT.

Figure is identical to Figure in Clause 55, and in the revision draft, without comment, commenter may wish to address with comments on revision or maintenance.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.5 P 154 L 33 # 299  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A PMA

The statement "Common-mode tests use the common-mode return point as a reference." on line 33, page 154 is out of context and not clear.

There is not definition of the common-mode return point.  
There is no nearby descriptions about common-mode tests.

It should be moved to an appropriate location with a referent to the definition of the common-mode return point, or removed.

*SuggestedRemedy*

Remove the statement of "Common-mode tests use the common-mode return point as a reference" on line 33, page 154.

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to search for any tests left hanging and reinsert statement there if needed.

CI 113 SC 113.5.2 P 155 L 2 # 415  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Name of register 1.132 is incorrect relative to clause 45 register name

*SuggestedRemedy*

Change "(40GBASE-T Control Register)" to "(10G/40GBASE-T test mode register)"

Response Response Status C

ACCEPT.

CI 113 SC 113.5.3.2 P 158 L 37 # 416  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

missing capitalization in title

*SuggestedRemedy*

replace "transmitter" with "Transmitter"

Response Response Status C

ACCEPT. Dup of comment 343

CI 113 SC 113.5.3.2 P 158 L 38 # 343  
Lusted, Kent Intel

Comment Type E Comment Status A EZ

Title of 113.5.3.2 has a lower case first letter.

*SuggestedRemedy*

Change "transmitter nonlinear distortion" to "Transmitter nonlinear distortion"

Response Response Status C

ACCEPT. Dup of comment 416

CI 113 SC 113.5.3.2 P 158 L 47 # 424  
Zimmerman, George CME Consulting

Comment Type T Comment Status A PMA

Equation 113-9, needs to be frequency scaled to get the same SNR due to transmitter nonlinear distortion as 10GBASE-T, as flagged by editors note. Editor's note has served its purpose.

*SuggestedRemedy*

In Equation 113-9: change f/25 to f/100  
Delete editors note, lines 47-50

Response Response Status C

ACCEPT.

CI 113 SC 113.5.3.2 P 158 L 47 # 444  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A PMA

If the editor's note is correct, then this draft was not ready for WG ballot.

*SuggestedRemedy*

If the note is false, then remove it. If it is true, then fix the SFDR and restart the WG ballot.

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment 424

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.5.4 P 160 L 49 # 425  
 Zimmerman, George CME Consulting

Comment Type T Comment Status A Cabling

113.7 does not specify patch cabling and interconnecting hardware. It specifies the link segment as a whole. Cabling specifications describe the patch cabling and interconnecting hardware. (same issue exists in clause 55)

**SuggestedRemedy**

Change "using patch cabling and interconnecting hardware that is within the limits specified in 113.7" to "through link segments that are within the limits specified in 113.7".  
 (consider maintenance request to clause 55 as well).

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Replace: patch cabling and interconnecting hardware

To: cabling

CI 113 SC 113.5.4.3 P 161 L 22 # 246  
 HESS, DAVE CORD DATA

Comment Type ER Comment Status A Cablingrefs

Include all cabling standards designations

**SuggestedRemedy**

change:  
 "Category 8 channel"  
 to:  
 "ISO/IEC Class I / ISO/IEC Class II / TIA Category 8 channel"

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Overtaken by events. See comment#445.

CI 113 SC 113.5.4.3 P 161 L 22 # 85  
 Maguire, Valerie Siemon

Comment Type E Comment Status A Cablingrefs

"Category" is usually not capitalized when used mid-sentence.

**SuggestedRemedy**

Replace "Category" with "category"

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Overtaken by events. Text replaced by comment#445.

CI 113 SC 113.5.4.3 P 161 L 32 # 445  
 Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A PMA

If the editor's note is correct, then this draft was not ready for WG ballot.

**SuggestedRemedy**

If the editor's note is incorrect, then remove it. If the editor's note is correct, then "confirm the source-adjustment criteria, measurement points, and levels used with the clamp methodology in this subclause" and restart the WG ballot.

Response Response Status W

ACCEPT IN PRINCIPLE.  
 Remove editor's note.  
 •Include the proposed text in cibula\_3bq\_02a\_0515.pdf as an informative Annex  
 •Update 113.5.4.3 to reference the informative Annex as shown on slide 16 of cibula\_3bq\_02a\_0515.pdf

Including editors notes to highlight technical issues is consistent with 802.3 practice in working group ballots.

CI 113 SC 113.5.4.5 P 162 L 33 # 426  
 Zimmerman, George CME Consulting

Comment Type T Comment Status A Shortreach

"both short reach test channels" - there is only one, and it is specified in 113.5.4.6

**SuggestedRemedy**

Change "through both short reach test channels" with "through a (short reach) link segment meeting the requirements specified in 113.5.4.6".

Response Response Status C

ACCEPT IN PRINCIPLE.  
 See comment 97.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.5.4.5 P 162 L 37 # 446  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A Shortreach

Subject/verb agreement problem in the sentence: "The short reach link segment meeting the transmission requirements in 113.5.4.6 are specified to support up to 5 meters."

## SuggestedRemedy

Delete this sentence, and add change the text of 113.5.4.6 to read:  
"The short reach cable assembly contains balanced twisted-pair terminated in a connector at each end for use as a short reach link segment of up to 5 meters in length between MDIs."

Response Response Status W

ACCEPT IN PRINCIPLE.  
Implement with comment#97

CI 113 SC 113.5.4.5 P 162 L 40 # 427  
Zimmerman, George CME Consulting

Comment Type T Comment Status A Shortreach

Register 1.131 (Phy Short reach mode) is misnamed, and also needs 40G inserted in clause 45 definition (45.2.1.64.2)

## SuggestedRemedy

Change "PHY short reach register setting" to "PHY short reach mode register setting".  
Insert text to Clause 45.2.1.64.2, after "The short reach mode of the 10GBASE-T PHY provides a means for operation on a cable plant that has parametric performance equivalent to 30 m of Class F and Class EA cabling as defined in 55.5.4.5.":  
"The short reach mode of the 40GBASE-T PHY provides a means for operation on a link segment that has parametric performance equivalent to a 5m direct attach cable assembly specified in 113.5.4.6."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 97

CI 113 SC 113.5.4.6 P 162 L 42 # 97  
McClellan, Brett Marvell

Comment Type TR Comment Status A Shortreach

Subclause 113.5.4.6 Direct attach cable assembly and subclauses 113.5.4.6.1 through 113.5.4.6.14 specify a link segment, not receiver electrical specifications. The appropriate locations for this section is under Subclause 113.7 Link segment characteristics.

## SuggestedRemedy

Move Subclauses 113.5.4.6 through 113.5.4.6.14 into 113.7.

Response Response Status W

ACCEPT.

Move to 113.7 and relable as 'short reach/direct attach link segment specifications'. Check all references to 113.5.4.6 to refer to new subclause under 113.7. Check all references to short reach test mode.

Editorial license to implement.

CI 113 SC 113.5.4.6 P 162 L 43 # 447  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status R Shortreach

Use of the term "direct attach cable assembly" will cause confusion in the industry. The industry generally regards a DAC cable as being constructed of two twin-axial cables, not a short segment of 4 twisted pair.

## SuggestedRemedy

Change the subclause heading to be "Short reach cable assembly" and change the text of the subclause to read:  
"The short reach cable assembly contains balanced twisted-pair terminated in a connector at each end for use as a short reach link segment of up to 5 meters in length between MDIs."

Response Response Status W

REJECT.

Direct attach subclause to remain;  
Direct attach usage consistent with definitions in specifications for 100  $\Omega$  Category 8 Cabling (TR42.7-2015-04-04x-Category-8\_d3.1\_Copyright.pdf) direct attach: A reduced channel definition that includes plug connectors at the beginning and end of the channel and does not contain connecting hardware within the channel.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.5.4.6 P 162 L 43 # 448  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status A Shortreach

The description of the short reach cable assembly should not be a subclause of the receiver electrical specifications. Instead, it should be a subclause of 113.7 Link segment characteristics.

## SuggestedRemedy

Move all of 113.5.4.6 and its subclauses under 113.7.

Response Response Status W

ACCEPT.

See comment 97.

CI 113 SC 113.5.4.6.1 P 163 L 12 # 301  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A Cabling

B is not defined for f less than 10 MHz.

## SuggestedRemedy

Change "10 <= f <= 500" on line 12 with "1 <= f <= 500".

This is consistent with TR42.7-2015-04-04x, Draft 3.1, Table 96, page 79.

Response Response Status C

ACCEPT.

CI 113 SC 113.5.4.6.1 P 163 L 13 # 302  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A Cabling

B has large discontinuity at f = 500.

Also, the definition of B for f > 500 is inconsistent with TR42.7-2015-04-04x.

## SuggestedRemedy

Change "- 0.000605 x sqrt(f)" with "+ 0.000605 x f".

This is consistent with TR42.7-2015-04-04x, Draft 3.1, Table 96, page 79.

Response Response Status C

ACCEPT.

CI 113 SC 113.5.4.6.1 P 163 L 15 # 303  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A Cabling

2dB on line 15, page 163 is inconsistent with 3dB defined in TR42.7-2015-04-04x, Draft 3.1, section 6.4.2, line 1444, page 53.

## SuggestedRemedy

Change the line 15 as follows:

Calculations that result in insertion loss values less than 3 dB shall revert to a requirement of 3dB maximum.

This is consistent with TR42.7-2015-04-04x, Draft 3.1, Section 6.4.2, line 1444, page 53.

Response Response Status C

ACCEPT.

CI 113 SC 113.5.4.6.1 P 163 L 2 # 300  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The outer most "(" and ")" of equation (113-13) are not necessary.

## SuggestedRemedy

Remove the outer most "(" and ")" of equation (113-13).

Response Response Status C

ACCEPT.

CI 113 SC 113.5.4.6.14 P 167 L 12 # 469  
DiMinico, Christopher MC Communications

Comment Type E Comment Status A EZ

Correct text: Change PSANEXT to PSAACRF

## SuggestedRemedy

Replace PSANEXT with PSAACRF in sentence: When the computed PSAACRF value at a certain frequency exceeds 75 dB, the PSANEXT result at that frequency is for information only.

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.5.4.6.14 P 168 L 1 # 240  
HESS, DAVE CORD DATA

Comment Type ER Comment Status A Cablingrefs  
Some uses of "ISO" should be "ISO/IEC"

## SuggestedRemedy

Replace "ISO" with "ISO/IEC"

Response Response Status C  
ACCEPT IN PRINCIPLE. See comment#243

CI 113 SC 113.5.4.6.14 P 168 L 14 # 219  
Shariff, Masood CommScope

Comment Type T Comment Status A Cabling  
Equation 113-25 needs to be updated to match TIA-568-C.2-1 draft 3.1

## SuggestedRemedy

Change equation 113-25 to

$PSAACRF \Rightarrow 61 - 20 \log(f / 100)$

Response Response Status C  
ACCEPT.

CI 113 SC 113.5.4.6.2 P 163 L 25 # 215  
Shariff, Masood CommScope

Comment Type E Comment Status A EZ  
RL for direct attach link segments has duplicate specs at 25 MHz and 1000 MHz

## SuggestedRemedy

Change  $\leq 25$  to  $< 25$   
and  $\leq 1000$  to  $< 1000$

Response Response Status C  
ACCEPT IN PRINCIPLE.  
Use consistent notation for symbols in equations (e.g., =, >, etc)

$1000 < f \leq 2000$   
does not include 1000  
 $25 < f \leq 1000$   
does not include 25

CI 113 SC 113.5.4.6.2 P 163 L 25 # 304  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A Cabling  
Return loss is not defined for  $f < 10$ .

## SuggestedRemedy

Change " $10 \leq f \leq 25$ " on line 25, page 163 with " $1 \leq f \leq 25$ ".

This is consistent with TR42.7-2015-04-04x, Draft 3.1, Table 53, page 52.

Response Response Status C  
ACCEPT.

CI 113 SC 113.5.4.6.4 P 164 L 10 # 216  
Shariff, Masood CommScope

Comment Type E Comment Status A EZ  
Missing spec for 2000 MHz

## SuggestedRemedy

Change  $< 2000$  to  $\leq 2000$

Response Response Status C  
ACCEPT.

CI 113 SC 113.5.4.6.5 P 164 L 33 # 217  
Shariff, Masood CommScope

Comment Type E Comment Status A EZ  
Missing spec at 2000 MHz

## SuggestedRemedy

Change  $< 2000$  MHz to  $\leq 2000$  MHz

Response Response Status C  
ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.5.4.6.5 P 64 L 27 # 468  
 DiMinico, Christopher MC Communications  
 Comment Type E Comment Status A EZ  
 Correct table 113-18 heading  
 SuggestedRemedy  
 Change: NEXT loss TO: MDNEXT loss  
 Response Response Status C  
 ACCEPT.

CI 113 SC 113.5.4.6.9 P 166 L 18 # 440  
 Zimmerman, George CME Consulting  
 Comment Type E Comment Status A Cabling  
 Description of PSACRF in terms of pair-to-pair ELFEXT is redundant  
 SuggestedRemedy  
 Minimize redundancies in 113.5.4.6.x sections.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 (1)See comment#472 to correct 113-21  
 (response to remedy)PSACRF is limit (113-20) and 113-21 is calculation of impairments to compare against the limit.  
 Response to add clarification and remove subclause 113.5.4.6.9 (which may be considered a redundancy)  
 (3-1)Delete subclause text "113.5.4.6.9 Multiple disturber power sum equal level far-end crosstalk (PS ACRF)"  
 (3-2)Move equation 113-21 before 113-20  
 (3-3)Move text "PS ACRF is determined by summing the power of the three individual pair-to-pair differential ACRF values over the frequency range 1 MHz to 2000 MHz as follows in Equation (113-21) after sentence "To ensure the total FEXT coupled into a duplex channel is limited, multiple disturber ACRF is specified as the power sum of the individual ACRF disturbers.

CI 113 SC 113.5.4.6.9 P 166 L 18 # 472  
 DiMinico, Christopher MC Communications  
 Comment Type ER Comment Status A EZ  
 Change variable name EI to ACRF to align with parameter name  
 SuggestedRemedy  
 Change variable name EI to ACRF and in equation 113-21  
 Response Response Status W  
 ACCEPT.

CI 113 SC 113.6 P 168 L 20 # 401  
 Remein, Duane Huawei Technologies  
 Comment Type TR Comment Status R MGMT  
 This para make is sound like CI 45 and MDIO are required for 40G. However CI 45 is optional for all subsequent clauses.  
 See related comment against CI 28D.8 pg 28 ln 12  
 SuggestedRemedy  
 Create a cross reference table (for example see 82.3.1 PMD MDIO function mapping Table 82-10 and elsewhere in Section 6 of the Std that lists required variables and their corresponding MDIO registers.  
 Response Response Status W  
 REJECT.  
 Statement is clear that the functions MAY BE provided by CI 45, language and definitions are consistent with existing language in Clause 55.



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.6.1 P 168 L 37 # 417  
 Zimmerman, George CME Consulting

Comment Type E Comment Status D Autoneg

autonegotiation doesn't determine whether the local PHY performs or supports a capability, it is either to ADVERTISE whether the local PHY performs or supports, or, alternatively whether the REMOTE PHY performs or supports, or, alternatively, whether the local PHY performs these functions, not whether it supports them...

## SuggestedRemedy

change "determine" to "advertise" in items c, d, and e.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Usage of 'support' is consistent with other clauses of IEEE Std. 802.3

CI 113 SC 113.6.1 P 170 L 5 # 81  
 Kim, Yong Broadcom

Comment Type T Comment Status D Autoneg

In anticipation of 25GBASE-T being added to .3bq project, and allocating two AN bits for 40GBASE-T not currently in D2.0 (fast retrain and repeat train - separate comments to D2.0) and respective AN bits for 25G (4), MC9 would be full (no spare bits). Consider taking a new message code and define AN bits that may be more friendly to modern higher speed PHY types, e.g. 10G/25G/40GBASE-T. Note: Not a part of this comment, but if the comment is accepted, then consider coordinating the effort with overlapping project 802.3bz anticipated PHY types of 2.5G and 5G that may serve 1G/2.5G/5G/10GBASE-T.

## SuggestedRemedy

Define a new extended message code (other than MC9) that serves 40GBASE-T AN requirements, along with 10G, 1G, and anticipated 25GBASE-T inclusion.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Task force to consider proposal along with comments 92 & 105

CI 113 SC 113.6.1.1 P 168 L 43 # 402  
 Remein, Duane Huawei Technologies

Comment Type TR Comment Status A MGMT

This statement requires CI 45 which is optional for all Eth.

"A 40GBASE-T PHY shall use the management register definitions and values specified in Table 113-19."

## SuggestedRemedy

See comment against CI 113.6 pg 168 ln 20.

Scrub the draft for any statements that require CI 45 and reword to require variables rather than CI 45 registers.

Response Response Status W

ACCEPT IN PRINCIPLE.

Insert "When Clause 45 registers are implemented" so that it reads:  
 "When Clause 45 registers are implemented, a 40GBASE-T PHY..."

CI 113 SC 113.6.1.2 P 169 L 24 # 95  
 McClellan, Brett Marvell

Comment Type T Comment Status A xGBASE-T

"10GBASE-T and 1000BASE-T formatted Extended Next Page" should be "xGBASE-T technology message Extended Next Page" so that it matches the change made in 28C.11 similar page 169 line 27

"40GBASE-T message page exchange" should be "xGBASE-T technology message Extended Next Page exchange"

## SuggestedRemedy

page 169 line 24 change "10GBASE-T and 1000BASE-T formatted Extended Next Page" to "xGBASE-T technology message Extended Next Page"  
 line 27 change "40GBASE-T message page exchange" to "xGBASE-T technology message Extended Next Page exchange"

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to "MultiGBASE-T and 1000BASE-T technology message Extended Next page" since new definition does not include 1000BASE-T (see comment 6)

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 113 SC 113.6.1.2 P 170 L 20 # 79  
Kim, Yong Broadcom

Comment Type ER Comment Status A Autoneg

Presumed 10G values, U20 LD PMA training reset request, U19 Fast re-train ability, U18 PHY Short reach mode, and U17 loop timing ability, should add "10GBASE-T" in their Name (description) to be clearer to the readers that those bits are for 10GBASE-T, and not 40GBASE-T (and not 1000BASE-T, 100BASE-TX, etc). Note: Fast re-train for 40G needs to be added (the ability being per-PHY ability), and separate comment is submitted for that.

#### Suggested Remedy

Add the word "10BASE-T" to U20, U19, U18, and U17 Names.

Response Response Status C

ACCEPT.

Cl 113 SC 113.6.1.2 P 170 L 20 # 107  
Lo, William Marvell Semiconductor

Comment Type TR Comment Status A Training

40GBASE-T specifies option to reset training PRBS. However it is not clear such bit is defined in table 113-20

#### Suggested Remedy

Option 1:

In bit U20 rename "LD PMA training reset request" to "40/10GBASE-T LD PMA training reset request"

The rationale of sharing the same bit for both speeds is that any implementation that prefers one way for one speed will most likely prefer the same way for the other speed. There is no need to specify a separate bit for 10G and 40G.

Option 2:

Remove the option to reset PMA training PRBS every frame in 40GBASE-T

Commenter is ok if either option 1 or 2 adopted.

Response Response Status W

ACCEPT IN PRINCIPLE.

See comment 84.

Task Force to discuss with 93 & 84

Straw Poll:

Allocate a new autoneg bit (U21) for 40GBASE-T LD PMA training reset request

4

OR

Remove the option to reset PMA training PRBS every frame in 40GBASE-T  
13

Move to remove the option to reset PMA training PRBS every frame in 40GBASE-T

M: Brett McClellan

S: William Lo

Y: 13

N: 6

A: 17

MOTION FAILS (Technical >= 75%)

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.6.1.2 P 170 L 41 # 80  
Kim, Yong Broadcom

Comment Type ER Comment Status A Autoneg

U13 - Port Type bit (1 = Multiport device, 0 = single-port device) -- following all the references to 45.2.7.10.3 and 40.5.1.1 and few other references, there is no clarity on what Multiport device is when: Multiport device supports a two technology ability. 40.5.1.1 is clear in the context of 1000BASE-T and solely for 1000BASE-T. 10GBASE-T duplicates these bits and make no clarification on how definition changes (or NOT change) when mixed 1000BASE-T and 10GBASE-T are implemented in the device. Addition of 40GBASE-T to this mix without clarification would be confusing, i.e. if a device has two ports, one 1G/10GBASE-T and one 10G/40GBASE-T only port(for example), and the 10G/40GBASE-T negotiates at 40GBASE-T on one port, does it set multiport? Also the definition from the 1000BASE-T conveys "PREFERNECE" context, and that is not present in this section (unless you follow nested references). The intent is was to allow favoring multiport device to be MASTER, if so desired. So clarify that, no technical change, and move forward re-using this bit for 40G (or any other ability).

===== for easy reference, 40.5.1.1 copied here =====

(1000BASE-T) 40.5.1.1 table entry states:

Bit 9.10 is to be used to indicate the preference to operate as MASTER (multiport device) or as SLAVE (single-port device) if the MASTER-SLAVE Manual Configuration Enable bit, 9.12, is not set.

Usage of this bit is described in 40.5.2

1=Multiport device  
0=single-port device"

## SuggestedRemedy

Either a) delete "1= multiport device, and 0 = single-port device) and replace it with direct reference to 40.5.1.1 (and leave the 45.2.7.10.3 reference as is), OR,  
b) copy the text from bit 9.10 of 40.5.1.1 for U13.

Response Response Status C

ACCEPT IN PRINCIPLE.

Copy text from bit 9.10 of 40.5.1.1 for U13.

Commenter is advised he may wish to submit a comment on the revision draft for Clause 55 or a maintenance request, since same issue exists in Clause 55.

CI 113 SC 113.6.1.2 P 170 L 5 # 105  
Lo, William Marvell Semiconductor

Comment Type TR Comment Status A Autoneg

40GBASE-T fast retrain bit not defined in Auto-Negotiation page

## SuggestedRemedy

See Lo\_3bq\_01\_0515.pdf for alternate scheme and McClellan\_3bq\_01\_0515.pdf for proposed text.

Recommend fast retrain and EEE bits to be exchanged in InfoField during training instead of during Auto-Negotiation

Response Response Status C

ACCEPT IN PRINCIPLE.

Task Force to consider presentation consider along with comments 92 & 81

CI 113 SC 113.6.1.2 P 170 L 5 # 84  
Kim, Yong Broadcom

Comment Type TR Comment Status A Training

"repeat training" capability as presented in

[http://www.ieee802.org/3/bq/public/jul14/southern\\_3bq\\_01\\_0714.pdf](http://www.ieee802.org/3/bq/public/jul14/southern_3bq_01_0714.pdf)

was adopted by a motion (in minutes) in

[http://www.ieee802.org/3/bq/public/jul14/unconfirmed\\_minutes\\_3bq\\_0714.pdf](http://www.ieee802.org/3/bq/public/jul14/unconfirmed_minutes_3bq_0714.pdf)

So unless there were a committee action to reverse this requirement (the commenter is not aware of such) and in which case, this comment is to be withdrawn by the commenter, this ability needs to be defined.

## SuggestedRemedy

Please do so (add a 40GBASE-T repeat-train ability).

Response Response Status C

ACCEPT IN PRINCIPLE.

Allocate a new autoneg bit (U21) for 40GBASE-T LD PMA training reset request

Add Editor's note (to be removed prior to publication) that if other PHY projects wish to use the PMA training reset request feature, they may use this same bit.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 113 SC 113.6.1.2 P 170 L 5 # 83  
Kim, Yong Broadcom

Comment Type TR Comment Status A Autoneg

Fast re-train for 40GBASE-T needs to added (the ability being per-PHY ability).

*SuggestedRemedy*

Please do so (add a 40GBASE-T Fast re-train ability).

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 79, Task Force to discuss autonegotiation of features and whether bits are joint for 10G/40G or separate.

Cl 113 SC 113.6.1.2 P 170 L 6 # 92  
McClellan, Brett Marvell

Comment Type TR Comment Status A Autoneg

Advertisement of 40GBASE-T EEE should be moved from the xGBASE-T technology message extended next page exchange to an Infofield message exchange during link training. See presentations: Lo\_3bq\_01\_0515.pdf and McClellan\_3bq\_01\_0515.pdf  
EEE capability exchange is not necessary prior to the start of link training. Similarly 40G fast retrain capability should be part of an Infofield message exchange. By moving these capability exchanges to the Infofield we can free up enough bits in the xGBASE-T technology message to advertise 25G, 2.5G and 5G speeds. Without this change a new technology message will be required for 25G, 2.5G and 5G.

*SuggestedRemedy*

See presentations for text and figure changes: Lo\_3bq\_01\_0515.pdf and McClellan\_3bq\_01\_0515.pdf  
text changes required are as follows:

page 48 line 42  
change "Bit 7.32.3 is used to select whether or not Auto-Negotiation advertises the ability to support 40GBASE-T fast retrain."  
to "Bit 7.32.3 is used to select whether or not the 40GBASE-T PHY advertises the ability to support 40GBASE-T fast retrain. Fast retrain ability is exchanged during link training. See 113.4.2.5.10."

page 51 line 9 Clause 45.2.7.13  
change "113.6.1; U21" to "113.4.2.5.10; Infofield Octet 12 bit 7"

page 51 line 32 Clause 45.2.7.14  
change "28.2.3.4.128; U3 / 113.6.1; U24" to "113.4.2.5.10; Infofield Octet 12 bit 7"  
NOTE: 28.2.3.4.128 does not exist

page 71 line 26 Clause 113.1  
change "Configurations wishing to disable fast retrain on the link may do so by advertising lack of support in Clause 28 AutoNegotiation, thus preventing the link partner from attempting fast retrain and potentially dropping the link."  
to "Configurations wishing to disable fast retrain on the link may do so by advertising lack of support in register 7.32, thus preventing the link partner from attempting fast retrain and potentially dropping the link. See 45.2.7.10."

page 78 line 16 Clause 113.1.3.3  
change "Support for the EEE capability is advertised during Auto-Negotiation."  
to "Support for the EEE capability is advertised in the Infofield (Octet 12 bit 7) during the PMA\_PBO\_Exch state.

page 134 Clause 113.4.2.5  
line 4  
change "Reserved" to "Reserved / Ability"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl 113  
SC 113.6.1.2

Page 36 of 97  
5/26/2015 8:39:57 AM

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

line 26  
change "LPI Disable Time" to "Reserved / Ability / LPI Disable Time"

page 137 line 20 Clause 113.4.2.5.10  
change

"113.4.2.5.10 Reserved Field

All InfoField fields denoted Reserved in Figure 113–24, Figure 113–25, and Figure 113–26 are reserved for future use. This includes octets Oct11 and Oct12 when Coeff\_exchange<2>=0, Oct9<3:2> when transition counter is announced and [Oct9<3:0>, Oct10<7:0>] when no transition is announced and no coefficients are exchanged."

to

"113.4.2.5.10 Ability Field

Ability field (1 octet). Represented by the octet Oct12{EEE Ability<7>, THP Bypass Request<6>, Fast Retrain<5>, Reserved<4:0>}. Used to advertise the abilities of the PHY during the PMA\_PBO\_Exch state when Message<7:6> = 01.

For every other state, this octet is set to zero and ignored by the link partner. The Ability bits are defined as follows:

Oct12<4:0> = Reserved

Oct12<5> = Fast Retrain

0 = Fast Retrain not supported

1 = Fast Retrain supported

Oct12<6> = THP Bypass Request in PMA\_Coeff\_Exchstate

0 = Local device requests link partner not to bypass THP during fast retrain

1 = Local device requests link partner to bypass THP during fast retrain

Oct12<7> = EEE Ability

0 = EEE not supported

1 = EEE supported

113.4.2.5.11 Reserved

All InfoField fields denoted Reserved in Figure 113–24, Figure 113–25, and Figure 113–26 are reserved for future use. This includes octets Oct11 and Oct12 when Coeff\_exchange<2>=0 and Message<7:6>= 01, Oct9<3:2> when transition counter is announced and [Oct9<3:0>, Oct10<7:0>] when no transition is announced and no coefficients are exchanged."

page 139 line 6 Clause 113.4.2.5.14

change "minwait\_timer expires. In the PMA\_PBO\_Exch state,"

To "minwait\_timer expires. In the PMA\_PBO\_Exch state while Infocfield Message<7:6> = 01, the PHY advertises EEE and Fast Retrain capability in octet 12 of the Infocfield. When both the local device and remote device advertise EEE capability then EEE is supported. When both the local device and remote device advertise Fast Retrain capability then Fast Retrain is supported. In the PMA\_PBO\_Exch state,"

page 141 line 5 Clause 113.4.2.5.15

change "After completing the link failure signal the PHY shall transition to the

PMA\_Coeff\_Exch state, keep its THP turned on with its previously exchanged coefficients, and send PAM2 signaling within a time period equivalent to 9 LDPC frame periods."

to "After completing the link failure signal the PHY shall transition to the PMA\_INIT\_FR state

followed immediately by the PMA\_Coeff\_Exch state. If the link partner requested THP bypass for fast retrain the PHY will bypass the THP ( or set THP coefficients to zero). Otherwise the PHY will keep its THP turned on with its previously exchanged coefficients, and send PAM2 signaling within a time period equivalent to 9 LDPC frame periods."

page 168 line 39 Clause 113.6.1

delete items d) and e)

page 170 line 6 Clause 113.6.1.2

set U25 to "Reserved, transmit as 0" (was EEE ability)

Response

Response Status C

ACCEPT.

Consider with Comments 105 & 81

Task Force to consider presentations

Straw Poll:

Accept as is 19

Accept in principle w/o EEE 0

Reject & accept new XNP 4

Reject all 0

Motion to accept comment 92

M: Brett McClellan

S: Jon Lewis

(Technical > 75%)

Y: 24

N: 3

A: 10

MOTION PASSES

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.6.1.3 P 171 L 15 # 96  
 McClellan, Brett Marvell

Comment Type TR Comment Status A Autoneg

Somehow this paragraph originally from Clause 40 lost some important information in the Clause 55 and 113 versions.

Original:

"40.5.1.3 Sending Next Pages

Implementers who do not wish to send additional Next Pages (i.e., Next Pages in addition to those required to perform PHY configuration as defined in this clause) can use Auto-Negotiation as defined in Clause 28 and the Next Pages defined in 40.5.1.2. Implementers who wish to send additional Next Pages are advised to consult Annex 40C."

Also note the change in "implementer" per Maintenance draft 2.1

## SuggestedRemedy

change text from

"113.6.1.3 Sending Next Pages

Implementors who do not wish to send additional Next Pages (i.e., Next Pages in addition to those required to perform PHY configuration as defined in this clause) can use Auto-Negotiation as defined in Clause 28."

to

"113.6.1.3 Sending Next Pages

Implementers who do not wish to send additional Extended Next Pages (i.e., Extended Next Pages in addition to those required to perform PHY configuration as defined in this clause) can use Auto-Negotiation as defined in Clause 28. Implementers who wish to send additional Extended Next Pages may do so using the AN XNP transmit registers. See 45.2.7.8."

## Response

Response Status C

ACCEPT IN PRINCIPLE.

In addition to suggested remedy, editor to scrub draft for instances of "implementor"

CI 113 SC 113.6.2 P 171 L 38 # 273  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A xGBASE-T

I do not agree to use abbreviation of xGBASE-T, because there are many xGBASE-T to be defined in near future, and it is not clear which xGBASE-T will be included.

I think it is safe to consider for each description for each technology rather than just using abbreviation.

If we are motivated to use an abbreviation to represent some common abstraction, we should give a clear definition of the abstraction rather than just using abbreviation.

## SuggestedRemedy

Change "xGBASE-T" on line 13 thru 15 with "40GBASE-T/10GBASE-T/1000BASE-T".

## Response

Response Status C

ACCEPT IN PRINCIPLE.

See comment 6

CI 113 SC 113.6.2 P 172 L 40 # 418  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Loop timing support is mandatory in 40GBASE-T. "both devices have the same loop timing support" is text left over from 10GBASE-T.

## SuggestedRemedy

Delete: "and both devices have the same loop timing support"

## Response

Response Status C

ACCEPT.

CI 113 SC 113.7 P 173 L 36 # 477  
 Thompson, Geoff GraCaSI S.A.

Comment Type ER Comment Status A Cablingrefs

through line 45.

The third and fourth sentence of this paragraph are confusing and are an unnecessary addition to the standard global definition in clause 1.4.

## SuggestedRemedy

Remove sentences 3 and 4

## Response

Response Status W

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.7 P 173 L 41 # 247  
HESS, DAVE CORD DATA

Comment Type ER Comment Status A Cablingrefs  
Update ISO/IEC standard.

**SuggestedRemedy**

change:  
"ISO/IEC/TR 11801-9901: Information technology - Generic cabling for customer premises - Part 9901: Guidance for balanced cabling in support of at least 40 Gbit/s data transmission,"  
to:  
"ISO/IEC 11801-1 Edition 3: Information technology - Generic cabling for customer premises - Part 1: General requirements,"

Response Response Status W  
ACCEPT.

CI 113 SC 113.7 P 173 L 42 # 88  
Maguire, Valerie Siemon

Comment Type T Comment Status A Cablingrefs  
Referring to the ISO/IEC/TR 11801-9901 guidelines is problematic in that the channel performance information in this document is only described to 1.6GHz and, thus, is incompatible with the link segment characteristics defined in 113.7. ISO/IEC/TR 11801-9901 guidelines are anticipated to be rolled into ISO/IEC 11801-1 Edition 3 and will be correctly referenced to 2GHz.

**SuggestedRemedy**

Replace, "ISO/IEC/TR 11801-9901: Information technology - Generic cabling for customer premises - Part 9901: Guidance for balanced cabling in support of at least 40 Gbit/s data transmission," with "ISO/IEC 11801-1 Edition 3".

And, delete Editor's note on lines 46 and 47.

Response Response Status C  
ACCEPT IN PRINCIPLE.

Comment 247 addresses document reference change.

Delete Editor's note on lines 46 and 47.

CI 113 SC 113.7 P 173 L 44 # 87  
Maguire, Valerie Siemon

Comment Type T Comment Status A Cablingrefs  
A "casual" reference to the Standard title should not appear here.

**SuggestedRemedy**

Delete, "Category 8 Cabling".

Response Response Status C  
ACCEPT IN PRINCIPLE. Overtaken by events. See comment#214.

CI 113 SC 113.7 P 173 L 47 # 91  
Mark, Laubach Broadcom Corporation

Comment Type TR Comment Status A Cablingrefs  
The Editors note mentions "pending". This raises the question to me of: do we need to pause on 802.3bq until ISO/IEC publication or can we proceed, and if so how far? What is the technical dependency of Table 113-22 with respect to the planned date of the publication of the ISO/IEC document?

**SuggestedRemedy**

Please give some reviewers some guidance and update the editors note.

Response Response Status W  
ACCEPT IN PRINCIPLE. Editor's notes deleted in comment#88

CI 113 SC 113.7.1 P 173 L 51 # 479  
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A Cabling  
The text is incorrect. What is required is not 4 cables of a single twisted pair each. that is implied from the text. What is required is cabling constructed with four pair balance twisted pair cable.

**SuggestedRemedy**

Change the text: "4 pairs of balanced cabling" to "4 pair balance cabling"

Response Response Status W  
ACCEPT IN PRINCIPLE.

Align text with P173-L36 - 40GBASE-T is designed to operate over 4-pair balanced cabling....

Change: The cabling system used to support 40GBASE-T requires 4 pairs of balanced cabling

To: The cabling system used to support 40GBASE-T requires 4-pair balanced cabling....

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.7.1 P 174 L 3 # 480  
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A Cabling

It says in this line that 40GBASE-T uses "star topology". That is untrue. It uses point-to-point topology as do ALL 802.3 devices which utilize "Link Segments".

*SuggestedRemedy*

Replace "star" with "point-to-point"

Response Response Status W

ACCEPT IN PRINCIPLE.

Change: a) 40GBASE-T uses a star topology with balanced cabling listed in Table 113-22 used to connect PHY entities.

To: a) 40GBASE-T uses balanced cabling listed in Table 113-22 in a star topology to connect PHY entities.

CI 113 SC 113.7.2 P 122 L 0 # 72  
Slavick, Jeff Avago Technologies

Comment Type TR Comment Status A EZ

Figure 113-16 has variable lfer\_timer\_done and lfer\_time\_not\_done neither of these are defined.

*SuggestedRemedy*

Add to the following to the lfer\_timer definition:  
When the timer reaches it's terminal count it will set lfer\_timer\_done = TRUE

Change the lfer\_timer\_not\_done to !lfer\_timer\_done in the Figure

Response Response Status W

ACCEPT.

Same defect exists in Clause 55 for 125us\_timer states. Commenter is encouraged to consider maintenance or comments on revision for Clause 55

CI 113 SC 113.7.2 P 174 L 19 # 89  
Maguire, Valerie Siemon

Comment Type TR Comment Status A Cablingrefs

The layout of Table 113-22 is not harmonized with the layout of Table 55-17. As a result, users familiar with the 10GBASE-T table may look at the 40GBASE-T table and mistakenly believe that only one grade of cabling supports 40GBASE-T. Eliminate this potential for confusion by revising the table to show separate rows for "Class I / Category 8" and "Class II". In addition, the cabling references in column 3 should be updated to align with the name of the reference Standard.

*SuggestedRemedy*

Column 1:

Cabling  
Class I / Category 8  
Class II

Column 2:

Supported link segment distances  
30 m  
30 m

Column 3:

Cabling references  
ISO/IEC 11801-1 Edition 3 / ANSI/TIA-568-C.2-1-201x  
ISO/IEC 11801-1 Edition 3

Response Response Status W

ACCEPT IN PRINCIPLE.

Implement rows in table 113-22 as follows:

Class I / Class II	30 m	ISO/IEC 11801-1 Edition 3
Category 8	30 m	ANSI/TIA-568-C.2-1



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.7.2 P 174 L 23 # 241  
HESS, DAVE CORD DATA

Comment Type ER Comment Status A EZ

Some uses of "ISO" should be "ISO/IEC".  
Complete "Category 8", should be "TIA Category 8"

## SuggestedRemedy

Table 113-22  
Replace "ISO" with "ISO/IEC" in 3 places  
Table 113-22, row 2, column 1  
Replace "ISO Class I / Category 8" with "ISO/IEC Class I / TIA Category 8"

Response Response Status W

ACCEPT.

CI 113 SC 113.7.2.1 P 174 L 40 # 242  
HESS, DAVE CORD DATA

Comment Type ER Comment Status A EZ

Some uses of "ISO" should be "ISO/IEC"

## SuggestedRemedy

Replace "ISO" with "ISO/IEC"

Response Response Status W

ACCEPT.

CI 113 SC 113.7.2.3 P 175 L # 220  
Shariff, Masood CommScope

Comment Type T Comment Status A Cabling

Duplicate specifications at 10, 100, 1000 MHz because of using the <= sign for the upper frequencies in the ranges

## SuggestedRemedy

Replace <= at these upper frequencies in the ranges with < in equation 113-27

Also update equation 113-27 to use the latest TIA-568-C.2-1 draft 3.1 RL equations for consistency with equations other parameters.

19.0 1 <= f < 10  
24-5log(f) 10 <= f < 40  
16.0 40 <= f < 130  
35-9log(f) 130 <= f < 1000  
8 dB 1000 <= f <= 2000

Response Response Status C

ACCEPT IN PRINCIPLE.

Replace <= at these upper frequencies in the ranges with < in equation 113-27

Also update equation 113-27 to use the latest TIA-568-C.2-1 draft 3.1 RL equations for consistency with equations other parameters.

Add Editor's Note (to be removed prior to publication): The Task Force is awaiting final resolution on this equation 113-27 by ISO/IEC SC25 WG3, expected in September 2015.

CI 113 SC 113.7.2.3 P 175 L 3 # 305  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

"10" of "log10" should be subscript.

## SuggestedRemedy

Use subscript for "10" of "log10" in the following locations:

2 locations in equation (113-27), line 3, page 175  
2 locations in equation (113-28), line 28, page 175  
2 locations in equation (113-29), line 40, page 175  
2 locations in equation (113-30), line 2, page 176  
2 locations in equation (113-31), line 28, page 176  
2 locations in equation (113-32), line 40, page 176  
2 locations in equation (113-33), line 3, page 177  
2 locations in equation (113-37), line 15, page 178  
2 locations in equation (113-38), line 37, page 178

Response Response Status C

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 113  
SC 113.7.2.3

Page 41 of 97  
5/26/2015 8:39:57 AM

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.7.2.4.5 P 178 L 28 # 470  
DiMinico, Christopher MC Communications

Comment Type ER Comment Status A EZ

Change variable name EI to ACRF to align with parameter name

## SuggestedRemedy

Change variable name EI to ACRF and in equation 113-38

Response Response Status W

ACCEPT.

CI 113 SC 113.7.2.4.5 P 178 L 47 # 411  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

title is incorrect relative to abbreviation and content

## SuggestedRemedy

Change "Multiple disturber power sum equal level far-end-crosstalk (PS ACRF)" to "Multiple disturber power sum attenuation to crosstalk ratio, far-end (PS ACRF)"

Response Response Status C

ACCEPT. Dup of 473

CI 113 SC 113.7.2.4.6 P 178 L 47 # 473  
DiMinico, Christopher MC Communications

Comment Type T Comment Status A EZ

subclause heading incorrect

## SuggestedRemedy

Change: 113.7.2.4.6 Multiple disturber power sum equal level far-end crosstalk (PS ACRF)  
To:113.7.2.4.6 Multiple disturber power sum attenuation to crosstalk ratio, far-end (PS-ACRF)

Response Response Status C

ACCEPT. Dup of 411

CI 113 SC 113.7.3.1.1 P 180 L 1 # 423  
Zimmerman, George CME Consulting

Comment Type T Comment Status A Cablingrefs

Annex 55B does not provide information on the PSANEXT calculation.

## SuggestedRemedy

Delete "Annex 55B provides additional information on identifying the number of adjacent link segments to consider in the PSANEXT calculation."

Response Response Status C

ACCEPT.

CI 113 SC 113.7.3.2 P 180 L 45 # 243  
HESS, DAVE CORD DATA

Comment Type ER Comment Status A Cablingrefs

Some uses of "ISO" should be "ISO/IEC"

## SuggestedRemedy

Replace "ISO" with "ISO/IEC"

Response Response Status W

ACCEPT.

Editors to review document for other instances for consistency.

CI 113 SC 113.7.3.2.1 P 180 L 30 # 471  
DiMinico, Christopher MC Communications

Comment Type ER Comment Status A EZ

Change variable name EI to AACRF to align with parameter name

## SuggestedRemedy

Change variable name EI to AACRF and in equation 113-42

Response Response Status W

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.7.3.2.1 P 181 L 5 # 412  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Text says PSANEXT, but is obviously about PSAACRF.

*SuggestedRemedy*

Change, "the PSANEXT result at that frequency is for information only." with "the PSAACRF result at that frequency is for information only."

Response Response Status C

ACCEPT.

CI 113 SC 113.7.4 P 181 L 32 # 413  
Zimmerman, George CME Consulting

Comment Type E Comment Status A Cablingrefs

Use of the ambiguous term "channel"

*SuggestedRemedy*

Change "on the same channel." to "on the same balanced twisted pair."

Response Response Status C

ACCEPT.

CI 113 SC 113.8.1 P 182 L 3 # 404  
Belopolsky, Yakov Bel Stewart

Comment Type TR Comment Status R MDI

40GBASE-T is intended to operate over the cabling that meets the requirements of the ISO/IEC 111801 standard that includes Class I and Class II channels and in fact recognizes that components of categories 6a and 7a or better can support such transmission. The IEC 60603-7-81 is not published, very limited technical data is available for such connectors. Connectors with mechanical interface specified in the IEC61076-3-110 have a better balance (no-split pair issues) and support more robust channel transmission performance. Numerous presentations were given to IEEE illustrating the superior transmission performance. The reliance on the only one connector type will result in the limited deployment of the 40GBASE-T technology. Figures 113-40 & 113-41: The informational figures 113-40 and 113-41 are misleading.

*SuggestedRemedy*

Remove pictures 113-40 and 113-41  
Line 6 remove the sentence starting with "These connectors are depicted...."

Line 4 add "Eight -pin connectors meeting the requirements of IEC 61076-3-110 (published) shall be used as an alternative mechanical interface to the balanced cabling"

Response Response Status C

REJECT.

Motion: Add in 113.8.1 "Eight -pin connectors meeting the requirements of IEC 61076-3-110 (published) may be used as an alternative mechanical interface to the balanced cabling"

M: Val Macguire  
S: Dave Hess

Y:7  
N:15  
A:3

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.8.1 P 182 L 9 # 55  
McDermott, Thomas Fujitsu

Comment Type E Comment Status R MDI

At this point in time, it appears that all Cat 8 cables are shielded cable. Figures 133-40 and 113-41, and table 113- 23 do not indicate any shield connection point(s).

## SuggestedRemedy

Revised both figures and the table to indicate shield connection point(s).

Response Response Status C

REJECT.

The figures are meant to depict compatible interfaces. There are many missing details from referenced documents.

CI 113 SC 113.8.1 P 183 L 3 # 466  
Lackner, Hans QoSCom GmbH

Comment Type TR Comment Status R MDI

IEC 60603-7-51/81 is not suitable for all applications. It should be possible to use as alternative connector IEC 61076-3-110 or 60603-7-82.

## SuggestedRemedy

If backward compatibility offered with IEC 60603-7-81 is not required, the interface specified in IEC 61076-3-110 or 60603-7-82 may be used.

Response Response Status W

REJECT.

Motion: To implement suggest remedy "If backward compatibility offered with IEC 60603-7-81 is not required, the interface specified in IEC 61076-3-110 or 60603-7-82 may be used."

M: Val Maguire

S: Yakov Belopolsky

Y:6

N:16

A:2

IEC 60603-7-51/81 shall be used. 113.8.1 MDI connectors  
Eight-pin connectors meeting the requirements of IEC 60603-7-51 (published) with the improved characteristics and frequency extensions specified in IEC 60603-7-81 shall be used as the mechanical interface to the balanced cabling. The plug connector shall be used on the balanced cabling and the jack on the PHY.

CI 113 SC 113.8.2.1 P 183 L 12 # 221  
Shariff, Masood CommScope

Comment Type E Comment Status A EZ

Improve MDI RL specifications formatting

## SuggestedRemedy

Format equations on the rows so the frequency ranges and equations line up from top to bottom

Response Response Status C

ACCEPT.

CI 113 SC 113.8.2.1 P 183 L 12 # 344  
Lusted, Kent Intel

Comment Type E Comment Status A MDI

An illustration of the RL limit given in EQ 113-45 improves readability.

## SuggestedRemedy

Add graphic.

Response Response Status C

ACCEPT.

Editor to add figure.

CI 113 SC 113.8.2.1 P 183 L 12 # 306  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The range of f in equation (113-45) is not aligned.

## SuggestedRemedy

Align the range of f in equation (113-45).

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.8.2.2 P 183 L 25 # 307  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The range of f in equation (113-46) is not aligned.

## SuggestedRemedy

Align the range of f in equation (113-46).

Response Response Status C

ACCEPT.

CI 113 SC 113.8.2.2 P 183 L 27 # 345  
Lusted, Kent Intel

Comment Type E Comment Status R MDI

An illustration of the Insertion Loss limit given in EQ 113-46 improves readability.

## SuggestedRemedy

Add graphic.

Response Response Status C

REJECT.

EQ 113-46 is 113.8.2.2 MDI impedance balance. Commentor please check comment.

CI 113 SC 113.8.2.2 P 183 L 27 # 222  
Shariff, Masood CommScope

Comment Type E Comment Status A EZ

Improve equation 113-46 formatting

## SuggestedRemedy

Format equation so columns line up ( maybe use left alignment )

Response Response Status C

ACCEPT.

CI 113 SC 113.8.2.2 P 183 L 31 # 414  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

transmission condition is on the relationship, not on the frequency in MHz

## SuggestedRemedy

Move "when the transmitter is transmitting random or pseudo random data." to line 21, so it reads "When the transmitter is transmitting random or pseudo random data, the common-mode-to-differential mode..... (eq 113-46) ... where f is the frequency in MHz. Test mode 5..."

Response Response Status C

ACCEPT.

CI 113 SC 113.8.2.2 P 183 L 42 # 109  
Cibula, Peter Intel Corporation

Comment Type E Comment Status A EZ

In subclause 113.8.2.2, the 1st instance of the mixed-mode parameter is correctly defined as "Sdc11". The other two instances (found in Line 42 and Line 46), referring to the reciprocal S-parameter "Scd11", appear to be in error and are inconsistent with the 1st instance.

## SuggestedRemedy

As indicated in the recommended text on Page 12 of cibula\_3bq\_02\_0115.pdf, change the two instances of "Scd11" in subclause 113.8.2.2 from "Scd11" to "Sdc11."

Response Response Status C

ACCEPT.

CI 113 SC 113.8.2.2 P 183 L 49 # 110  
Cibula, Peter Intel Corporation

Comment Type E Comment Status A MDI

Subclause 113.8.2.2 makes reference to two different transmitter states when describing the impedance balance requirement and the descriptive test method. Lines 31 and 32 state "Test-mode 5 may be used to generate an appropriate transmitter output.", while Lines 49 and 50 state "... but with the transmitter output disabled." The phrase in Lines 49 and 50 appears to be in error and is inconsistent with other text.

## SuggestedRemedy

As indicated in the recommended text on Page 12 of cibula\_3bq\_02\_0115.pdf, change the text in Lines 49 and 50 from "During the test the PHY is connected to the MDI as in normal operation, but with the transmitter output disabled." to "During the test the PHY is connected to the MDI as in normal operation."

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 113 SC 113.8.2.2 P 184 L # 465  
Lackner, Hans QoSCom GmbH

Comment Type T Comment Status R MDI

As some values of the channels specified can only be made if shields are used, the MDI connection has to be also a shielded design. When using shields the symmetry mechanisms are different. The values in Formula 113-57 are too high.

*SuggestedRemedy*

Change in Formula 113-57

48 to 40 and

44 to 35,7

Add to editors note in line 33 that lines 38-54 will be removed prior to publication.

Response Response Status C

REJECT.

Equation number stated is not valid. Assuming

113-46, the commentor has not provided sufficient information in comment

to support suggested remedy to change the draft for either equation 113-46 or the test methods described in L38-L54.

CI 113 SC 3 P 99 L # 403  
Wang, Zhongfeng Broadcom Corp.

Comment Type TR Comment Status R PCS

Table 113-2

title: Truncated blocks including control blocks (without leading 0).

Given the truncating operation shown in Table 113-2, we always move control blocks to the top and move data blocks to the bottom. Since data blocks in original 512B block can be in any row, this operation will involve muxing logic for all 64 bits for every data and control block, which causes extra hardware. In addition, at the receiver side, we need wait until entire 513B data is received before finishing reverse truncating.

*SuggestedRemedy*

1) We only need swap location of first byte for each data or control block.

This leads to much reduced muxing logic.

2) We transmit the first bytes of each data and control block immediately after leading 0. Then we transmit the rest 7 bytes for each data and control block. This will save significant processing latency at receiver side.

The above changes fully maintain data mapping of original truncating operation for each data byte. Only data reordering is involved. So there is no performance hurt.

Please see wang's contributions for detailed description.

Response Response Status U

REJECT.

Attempt at accept-in-principle:

Make changes documented in Text-comments-40G-T-transcoding.pdf, with the following changes:

give Editor license to connect text edit (3) in "comments..." correctly to referenced 'above case with pure data blocks'.

Straw Poll: Y: 8 N: 11

No consensus to make change

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 28 SC 28.3 P 23 L 5 # 374  
 Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

28 instances of "as appropriate" are inappropriate. You need to tell the staff editors what they are to do and not do what they think is appropriate.

## SuggestedRemedy

Change "as appropriate" to "as shown below" or "as follows" or similar wording that does not leave it to the editor's desecration.

Response Response Status W

ACCEPT. See comment 409.  
 The editor shall not desecrate the standard.

CI 28 SC 28.3 P 23 L 6 # 3  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

"Insert row in clause 28.3.1 as appropriate." should not reference "clause", we typically reference subclauses just by number

## SuggestedRemedy

Strike "clause" in line 6

Response Response Status C

ACCEPT. See comment 409

CI 28 SC 28.3 P 23 L 6 # 4  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction should be more precise: "Insert row in clause 28.3.1 as appropriate."

## SuggestedRemedy

Change to read: "Insert row in 28.3.1 under ."10GigT;"

Response Response Status C

ACCEPT. See comment 409

CI 28 SC 28.3 P 23 L 6 # 134  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

State where the new variable should be inserted.

Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:

"Insert new variable definition into 28.3.1 below 10GigT as follows:"

Remove the underline from the new text.

Response Response Status C

ACCEPT. See comment 409

CI 28 SC 28.3.1 P 23 L 5 # 408  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

indicate where to insert row

## SuggestedRemedy

replace "as appropriate" with "following row for 10GigT"

Response Response Status C

ACCEPT. See comment 409.

CI 28 SC 28.3.1 P 23 L 6 # 257  
 Grow, Robert RMG Consulting

Comment Type E Comment Status A EZ

What is appropriate. Looking at P802.3/D3.0, this list of variables appears to be random. I expect alphanumerical order would be appropriate, and will submit a comment against P802.3/D4.0 to make this section alphanumerical ordered. Also, format does not match base document.

## SuggestedRemedy

Change editing instruction to be Insert the following in the first variable list in alphanumerical order. Additionally, it appears that the semicolon should be followed by a tab rather than a space (please use same format as is used in the base, the list is also slightly indented on the left).

Response Response Status C

ACCEPT.

See comment 409.

Insert in order consistent with revision draft

Format same as base on indentation

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 28 SC 28.3.2 P 23 L 14 # 135  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Editing instruction is not clear.

## SuggestedRemedy

Change the editing instruction to:

"Change the indicated row in Table 28–9 as follows (unchanged rows not shown):

Response Response Status C

ACCEPT.

CI 28 SC 28.5 P 23 L 28 # 136  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Editing instruction does not say where the new row is to be inserted.

It is usual to show the heading row of tables being changed.

Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:

"Insert a row for \*40G at the end of the table in 28.5.3 as follows (unchanged rows not shown):"

Show the heading row for the table.

Remove the underline from the new row.

Response Response Status C

ACCEPT.

CI 28 SC 28.5.3 P 23 L 32 # 264  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

The option "\*\*40G" is defined but is not used.

## SuggestedRemedy

Add "40G:M" to the "Status" column for item SD11 and "!40G:M" to the "Status" column for item SD10.

Response Response Status C

ACCEPT.

CI 28 SC 28.5.4.8 P 23 L 39 # 137  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Editing instruction is not clear.

There are no paragraphs in the subclause.

It is usual to show the heading row of tables being changed

## SuggestedRemedy

Change the editing instruction to:

"Change the row for SD11 in the table in 28.5.4.8 as follows (unchanged rows not shown):"

Show the heading row for the table.

Response Response Status C

ACCEPT.

CI 28 SC 28.5.4.8 P 23 L 43 # 133  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

"28.3.2" should be a cross-reference

## SuggestedRemedy

Make "28.3.2" a cross-reference

Response Response Status C

ACCEPT.

CI 28 SC Table 26-9 P 23 L 13 # 259  
Grow, Robert RMG Consulting

Comment Type ER Comment Status A EZ

Again, what is appropriate, don't make the publication editor guess. Also a problem with line 27 and line 39.

## SuggestedRemedy

In all locations replace "appropriate." with "as follows:". Editor is requested to search for appropriate and make all editing instructions precise. Better to use instructions like: Change the indicated row of Table x-x as follows, Insert the following in numeric order.

Response Response Status W

ACCEPT. Dup of comment 258, see comment 409



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 28 SC Table 26-9 P 23 L 13 # 258  
 Grow, Robert RMG Consulting  
 Comment Type E Comment Status A EZ  
 Again, what is appropriate, don't make the publication editor guess.  
 SuggestedRemedy  
 Insert row in Table 28-9 in alphabetic order.  
 Response Response Status C  
 ACCEPT. See comment 409.

CI 28A SC P 25 L 1 # 263  
 Healey, Adam Avago Technologies  
 Comment Type E Comment Status A EZ  
 There are no obvious changes to Annex 28A.  
 SuggestedRemedy  
 Remove Annex 28A from the draft amendment.  
 Response Response Status C  
 ACCEPT. (dup of comments 5, 138, 375, 248, 260)

CI 28A SC 0 P 25 L 1 # 248  
 Frazier, Howard Broadcom Corporation  
 Comment Type TR Comment Status A EZ  
 Annex 28A does not belong in this draft amendment because there are no changes being made to it.  
 SuggestedRemedy  
 Delete Annex 28A from this draft amendment.  
 Response Response Status W  
 ACCEPT. (dup of comments 5, 138, 375, 260, 263)

CI 28A SC 28A P 25 L 1 # 138  
 Anslow, Pete Ciena  
 Comment Type E Comment Status A EZ  
 There are no editing instructions shown for Annex 28A and there are no changes shown  
 SuggestedRemedy  
 Either add editing instructions and show changes or remove Annex 28A from the draft.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE. Remove Annex 28A (dup of comments 5, 375, 248, 260, 263)

CI 28A SC 28A P 25 L 1 # 5  
 Hajduczenia, Marek Bright House Networks  
 Comment Type ER Comment Status A EZ  
 There are no changes in Annex 28A  
 SuggestedRemedy  
 Remove Annex 28A or implement changes required to support 40GBASE-T  
 Response Response Status W  
 ACCEPT IN PRINCIPLE.  
 Remove Annex 28A (dup of comments 138, 375, 248, 260, 263)

CI 28A SC n/a P 25 L 1 # 375  
 Remein, Duane Huawei Technologies  
 Comment Type ER Comment Status A EZ  
 If there are no changes (as indicated by Editors Instructions) then the clause should be excluded from the draft. If you anticipate changes then why are you in WG Ballot when you are clearly not technically complete?  
 SuggestedRemedy  
 Remove Annex 28A from Draft.  
 Response Response Status W  
 ACCEPT. (dup of comments 5, 138, 248, 260, 263)

CI 28B SC 28B P 26 L 5 # 139  
 Anslow, Pete Ciena  
 Comment Type E Comment Status A EZ  
 The title of Annex 28B is missing  
 SuggestedRemedy  
 Add the title of Annex 28B:  
 "IEEE 802.3 Selector Base Page definition"  
 Response Response Status C  
 ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI **28B** SC **28B.3** P **26** L **9** # **390**  
Remein, Duane Huawei Technologies

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

Why are you not placing this at the end of the list so that the staff editor does not have to "renumber other bullets"?

*SuggestedRemedy*

Make the addition item "k)" and remove the instruction to renumber.

Response Response Status **C**

REJECT.

List is the priority order of technologies, highest speeds go first.

CI **28B** SC **28B.3** P **26** L **9** # **140**  
Anslow, Pete Ciena

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

To use a "change" editing instruction would require the rest of the list to be included in the draft

*SuggestedRemedy*

Change the editing instruction to:

"Insert a new item a) "40GBASE-T full duplex" at the top of the list in 28B.3 as follows and renumber the other items:"

Remove the underline from the new item.

Response Response Status **C**

ACCEPT.

CI **28C** SC **28C** P **27** L **11** # **6**  
Hajduczenia, Marek Bright House Networks

Comment Type **T** Comment Status **A** xGBASE-T

It is not clear xGBASE-T is and where it is defined. There are two ways it seems to be defined "multigigabit", "multiple Gigabit", and "xGBASE-T" - which one is to be used?

*SuggestedRemedy*

If we want to use "xGBASE-T" in the document, it should be defined in Clause 1 as follows:

"xGBASE-T: designates jointly 1000BASE-T, 10GBASE-T, and 40GBASE-T"

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Add new definition to 1.4 defining MultiGBASE-T as "Specific BASE-T Ethernet PCS/PMA/PMDs at speeds in excess of 1000Mbps, including 10GBASE-T (Clause 55) and 40GBASE-T (Clause 113)"

xGBASE-T 15 1  
NGBASE-T 1 10  
X10GBASE-T 0  
nGBASE-T 19 2  
PAM16BASE-T 0  
GBASE-T 3 7  
SPEC10GBASE-T 1 >10  
10G/xBASE-T 8 3  
MULTIGBASE-T 10 0

Move: Resolve Comment 6 as:

Definition of MultiGBASE-T added to the definitions section, to specifically include 40GBASE-T and 10GBASE-T. References on lines 13 thru 15 changed to "1000BASE-T and MultiGBASE-T".

Change references to MultiGBASE-T Technology Message Code to be "MultiGBASE-T and 1000BASE-T Technology Message Code"

Editor to review draft and change all references from xGBASE-T to MultiGBASE-T.

M: Shadi AbuGhazaleh

S: Hossein Sederat

Y: 28 N: 0 A: 5 (TECHNICAL >= 75%)

MOTION PASSES

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI **28C** SC **28C.11** P **27** L **11** # **309**  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type **T** Comment Status **A** xGBASE-T

I do not agree to use abbreviation of xGBASE-T, because there are many xGBASE-T to be defined in near future, and it is not clear which xGBASE-T will be included.

I think it is safe to consider for each description for each technology rather than just using abbreviation.

If we are motivated to use an abbreviation to represent some common abstraction, we should give a clear definition of the abstraction rather than just using abbreviation.

*SuggestedRemedy*

Change "xGBASE-T" on line 11, page 27 with "40GBASE-T/10GBASE-T/1000BASE-T".

Change "xGBASE-T" on line 16, page 27 with "40GBASE-T, 10GBASE-T and 1000BASE-T".

Response Response Status **C**

ACCEPT IN PRINCIPLE.  
See comment 6

CI **28C** SC **28C.11** P **27** L **1116** # **82**  
Kim, Yong Broadcom

Comment Type **TR** Comment Status **A** xGBASE-T

Change to make MC9 to be a generic does not work (i.e. change to xGBASE-T) from 10GBASE-T and 1000GBASE-T), because it implies that all future xxBASE-T would use this. Secondary part of this comment is 1000BASE-T is not noted anywhere as 1GBASE-T, requiring careful changes everywhere appropriate to indicate 1000BASE-T == 1GBASE-T.

*SuggestedRemedy*

Just revise to reflect what is actually being done.  
Change to:  
Line 11 - 40GBASE-T/10GBASE-T/1000BASE-T  
Line 16 - 40GBASE-T, 10GBASE-T, and 1000BASE-T.

Response Response Status **W**

ACCEPT IN PRINCIPLE.  
xGBASE-T replaced with MultiGBASE-T, to be specifically defined term  
Generic reference to MC9 to be 1000BASE-T and MultiGBASE-T  
See comment 6

CI **28C** SC **28C.11** P **27** L **21** # **410**  
Zimmerman, George CME Consulting

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

Missing reference to 40GBASE-T by name

*SuggestedRemedy*

Insert "(40GBASE-T)" after "Clause 113".

Response Response Status **C**

ACCEPT. Dup of comment 310

CI **28C** SC **28C.11** P **27** L **21** # **7**  
Hajduczenia, Marek Bright House Networks

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

Unnecessary serial comma in "Clause 55 (10GBASE-T), and Clause 113"

*SuggestedRemedy*

Remove serial comma in "Clause 55 (10GBASE-T), and Clause 113"

Response Response Status **C**

ACCEPT.

CI **28C** SC **28C.11** P **27** L **21** # **310**  
Hidaka, Yasuo Fujitsu Laboratories of

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

"Clause 55" is followed by "(10GBASE-T)", but "Clause 113" is not followed by "(40GBASE-T)"

*SuggestedRemedy*

Insert "(40GBASE-T)" after "Clause 113".

Response Response Status **C**

ACCEPT. Dup of comment 410

CI **28C** SC **28C.11** P **27** L **21** # **141**  
Anslow, Pete Ciena

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

"Clause 55" should be a cross-reference

*SuggestedRemedy*

Make "Clause 55" a cross-reference

Response Response Status **C**

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI **28C** SC **28C.11** P **27** L **21** # **454**  
 Frazier, Howard Broadcom Corporation

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

It appears that the 802.3bz 2.5G/5G project may also use XNP, so this text change should be coordinated with 802.3bz to avoid conflicting editing instructions.

**SuggestedRemedy**

Coordinate with 802.3bz on text for 28C.11.

Response Response Status **C**

ACCEPT. Editor will keep track of changes in 802.3bz when any are adopted as text.

CI **28C** SC **28C.11** P **27** L **22** # **8**  
 Hajduczenia, Marek Bright House Networks

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

Missing serial comma in "40GBASE-T, 10GBASE-T and 1000BASE-T"

**SuggestedRemedy**

Change "40GBASE-T, 10GBASE-T and 1000BASE-T" to "40GBASE-T, 10GBASE-T>><< and 1000BASE-T"

Response Response Status **C**

ACCEPT. Dup of 142

CI **28C** SC **28C.11** P **27** L **22** # **142**  
 Anslow, Pete Ciena

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

The IEEE Editorial Style Manual includes:  
 "In a series of three or more terms, use a comma immediately before the coordinating conjunction (usually and, or, or nor)."

Consequently, "... that 40GBASE-T, 10GBASE-T and 1000BASE-T abilities..." should have an extra comma after "10GBASE-T"

**SuggestedRemedy**

Change:  
 "... that 40GBASE-T, 10GBASE-T and 1000BASE-T abilities..." to:  
 "... that 40GBASE-T, 10GBASE-T, and 1000BASE-T abilities..."  
 with the added comma in underline font.

Response Response Status **C**

ACCEPT. Dup of 8

CI **28D** SC **28D.8** P **28** L **10** # **69**  
 Marris, Arthur Cadence

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

Missing space

**SuggestedRemedy**

28D.8 Extensions required for Clause 113 (40GBASE-T)

rather than:  
 28D.8Extensions required for Clause 113 (40GBASE-T)

Response Response Status **C**

ACCEPT. Dup of 262

CI **28D** SC **28D.8** P **28** L **10** # **10**  
 Hajduczenia, Marek Bright House Networks

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

Newly added text in 28D.8 contains many statements about mandatory and required functions. It is not clear whether these are expected to be testable (and have PICS) or not.

**SuggestedRemedy**

Consider making statements about mandatory / required features into "shall" statements, if they are not covered elsewhere. Add PICS if new "shall" statements are added.  
 For example: "Auto-Negotiation is mandatory for 40GBASE-T" might be converted into "A 40GBASE-T PHY shall use Auto-Negotiation per XXX", where XXX contains reference where Auto-Negotiation is defined.

Response Response Status **C**

REJECT. New text is consistent with existing text for 10GBASE-T which states substantially the same mandatory and required functions, resulting in no confusion.  
 The commenter may consider comments on the revision or maintenance drafts.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 28D SC 28D.8 P 28 L 12 # 400  
 Remein, Duane Huawei Technologies

Comment Type TR Comment Status A MGMT

This statement implies CI 45 (which is optional in its entirety) is required:  
 "requires additional MDIO registers"

This also applies to other instances in the draft (such as 113.6.1.1 pg 168 ln 43 which also implies CI 45 registers are required).

## SuggestedRemedy

Create a cross reference table (for example see 82.3.1 PMD MDIO function mapping Table 82-10 and elsewhere in Section 6 of the Std that lists required variables and their corresponding MDIO registers.

Response Response Status W

ACCEPT IN PRINCIPLE.

Change "requires" to "defines"

and add "for use when Clause 45 is implemented." after "registers".

Editor to review other instances and make similar changes.

CI 28D SC 28D.8 P 28 L 24 # 144  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

"45.2.7" on line 24 and "28.3.1" on line 26 should be cross-references

## SuggestedRemedy

Make "45.2.7" on line 24 and "28.3.1" on line 26 cross-references

Response Response Status C

ACCEPT.

CI 28D SC 28D.8 P 28 L 24 # 9  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Reference to 45.2.7 and 28.3.1 should be made live and not marked in green.

## SuggestedRemedy

Make links to 45.2.7 and 28.3.1 live, and make sure they are marked in black.

Response Response Status C

ACCEPT.

CI 28D SC 28D.8 P 28 L 8 # 143  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

28D.8 is not a paragraph

Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:

"Insert 28D.8 after 28D.7 as follows:"

Remove the underline from the new subclause.

Response Response Status C

ACCEPT.

CI 28D SC 28D.9 P 28 L 10 # 455  
 Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status R Format

The practice that was introduced by 100BASE-T2 of providing a long list of extensions for each new BASE-T PHY is getting out of hand, and will become worse with the future additions of 25G, 2.5G and 5G. Many of the extensions apply to all of the BASE-T PHYs introduced starting with 100BASE-T2. Rather than instantiating a new long list of extensions for 40GBASE-T, it would be better to present this information in tabular form.

## SuggestedRemedy

Replace 28D.4, 28D.5, 28D.6 and 28D.8 with a new subclause 28D.4 that presents all of the extensions for BASE-T PHYs in a table that is easily extensible to include future BASE-T PHYs.

Response Response Status W

REJECT.

Text is consistent with existing base standard style and practices. Practice describes what capabilities the new PHY requires for those unfamiliar with older PHYs, which is useful.

Commentor fails to provide replacement text.

Commenter may wish to address this on a full 802.3 scale through maintenance or 802.3bx.

CI 30 SC 30.2.5 P 29 L 10 # 265  
 Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Make the ruling and shading of Table 30-1e consistent with IEEE P802.3/D3.0.

## SuggestedRemedy

Contact the Editor-in-Chief of IEEE P802.3 (IEEE 802.3bx) for the ruling and shading information and reformat accordingly.

Response Response Status C

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 30

SC 30.2.5

Page 53 of 97

5/26/2015 8:39:57 AM

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

Cl 30 SC 30.2.5 P 29 L 12 # 311  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The updated cell in the header row of Table 30-1e which contains "10G/40GBASE-T Operating Margin package (condi-" is not big enough, and some texts are not visible.

Same problem in page 30 and 31.

## SuggestedRemedy

Make the header row taller to include the whole text.

Apply same changes to page 30 and 31 as well.

Response Response Status C

ACCEPT.

Cl 30 SC 30.2.5 P 29 L 13 # 70  
Marris, Arthur Cadence

Comment Type E Comment Status A EZ

Column heading not completely vusible

## SuggestedRemedy

Correct:  
10G/40GBASE-T Operating Margin package (condi-

Response Response Status C

ACCEPT.

Cl 30 SC 30.2.5 P 29 L 14 # 266  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

The column heading for the 10G/40GBASE-T Operating Margin package has become too long and "(conditional)" qualification word-wraps into oblivion.

## SuggestedRemedy

Increase the height of heading row so that the heading text fits.

Response Response Status C

ACCEPT.

Cl 30 SC 30.2.5 P 29 L 7 # 372  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A Format

While the Edition Instruction indicate there are changes in the COLUMN HEADER (which should be marked) of Table 30-1e there are none apparent.  
Also the Table has some Bold borders which are not in the original Table and should be removed.

## SuggestedRemedy

Change the Editing Instruction to more accurately describe the change or remove the Editing Instruction and Table 30-1e.

Response Response Status W

ACCEPT IN PRINCIPLE.

Change editing instruction to read "Change column header of '10GBASE-T Operating Margin Package...' to read '10G/40GBASE-T Operating Margin Package...' as shown "  
Check borders and align with current table in revision draft

Cl 30 SC 30.3.2.1 P 31 L 42 # 391  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Subclause reference in editors instruction is incorrect:  
"Change text of 30.3.2.1.2a include 40GBASE-T."

Similar problem in "Change text of 30.3.2.1.3a include 40GBASE-T."

## SuggestedRemedy

Change instructions to:  
"Change text of 30.3.2.1.2 to include 40GBASE-T as shown"  
"Change text of 30.3.2.1.3 to include 40GBASE-T as shown"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 30 SC 30.3.2.1 P 31 L 42 # 145  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Editing instruction is "Change text of 30.3.2.1.2a include 40GBASE-T."  
The referenced subclause has a spurious "a" at the end.

Same issue for 30.3.2.1.3

## SuggestedRemedy

Remove the spurious "a" from the subclause references on page 31 line 42 and also on page 32 line 27

Response Response Status C

ACCEPT.

CI 30 SC 30.3.2.1.2 P 31 L 42 # 146  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instructions for 30.3.2.1.2, 30.3.2.1.3, 30.5.1.1.19, 30.5.1.1.20, 30.5.1.1.21, 30.5.1.1.22, 30.5.1.1.24, and 30.5.1.1.25 are all:  
"Change text of 30.x.x.x include 40GBASE-T." which should be "to include" rather than "include"

## SuggestedRemedy

In the editing instructions for 30.3.2.1.2, 30.3.2.1.3, 30.5.1.1.19, 30.5.1.1.20, 30.5.1.1.21, 30.5.1.1.22, 30.5.1.1.24, and 30.5.1.1.25 change:  
"include" to "to include"

Response Response Status C

ACCEPT.

CI 30 SC 30.3.2.1.2 P 31 L 47 # 267  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Use paragraph style consistent with IEEE P802.3/D3.0 for all attributes changed in this clause.

## SuggestedRemedy

Contact the Editor-in-Chief of IEEE P802.3 (IEEE 802.3bx) for the paragraph style information and reformat accordingly.

Response Response Status C

ACCEPT.

CI 30 SC 30.3.2.1.2 P 32 L 14 # 250  
Grow, Robert RMG Consulting

Comment Type E Comment Status A EZ

Clause number should be a cross reference.

## SuggestedRemedy

Replace text with cross reference. Also line 54.

Response Response Status C

ACCEPT.

CI 30 SC 30.3.2.1.2 P 32 L 9 # 147  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

In several of the changed subclauses in Clause 30 there is text shown in forest green which should be cross-references

## SuggestedRemedy

Make the following cross-references:

page 32, line 9 "Clause 55"  
page 32, line 49 "Clause 55"  
page 33, line 29 "Clause 45"  
page 33, line 30 "45.2.1.66"  
page 33, line 43 "Clause 45"  
page 33, line 44 "45.2.1.67"  
page 34, line 2 "Clause 45"  
page 34, line 3 "45.2.1.68"  
page 34, line 15 "Clause 45"  
page 34, line 16 "45.2.1.69"  
page 34, line 29 "45.2.1.79.2"  
page 34, line 42 "45.2.1.79.1"  
page 35, line 7 "30.2.5"  
page 35, line 16 "Annex 28B"  
page 35, line 18 "Annex 28B"  
page 35, line 20 "Annex 28B"  
page 35, line 30 "Clause 55"  
page 35, line 47 "Clause 28"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 30 SC 30.5.1.1.19 P 33 L 28 # 428  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Text reads for the 10/40GBASE-T PMA, as though the PMA defined does both rates. Meaning should be 10GBASE-T or 40GBASE-T PMA. occurs in 30.5.1.1.19, 20, 21, 22.

## SuggestedRemedy

Replace "10/40GBASE\_T PMA" with "10G or 40GBASE-T PMA" in 4 places.

Response Response Status C

ACCEPT.

CI 30 SC 30.5.1.1.24 P 34 L 29 # 429  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Missing reference to clause 113 40GBASE-T fast retrains, same issue on lines 29 (30.5.1.1.24) and 42 (30.5.1.1.25)

## SuggestedRemedy

replace "and 55.4.5.1" with "55.4.5.1 and 113.4.5.4" in two places.

Response Response Status C

ACCEPT.

CI 30 SC Table 30-1e P 29 L 13 # 249  
 Grow, Robert RMG Consulting

Comment Type ER Comment Status A xGBASE-T

Insert has caused a text wrap that is not shown. Also a problem for second and third pages of table.

There are other locations where adding speeds to the name may become a problem like in the PICS where non-breaking spaces have not been used resulting in a name split with only a single letter in the last line. For example 10G/25G/40G, increases row height would eliminate even more data rows below the headings. The quick solution of increasing row height to allow all text to show in one line is probably not the best for long term purposes.

## SuggestedRemedy

Perhaps something like xG (as used in other locations) might be better than a list of speeds. This will require a search and selective replace of 10G/40G.

Response Response Status W

ACCEPT IN PRINCIPLE.

Use newly defined term MultiGBASE-T for header

See comment 6 for definition of MultiGBASE-T.

Editor to review tables for spacing and row height issues.

CI 45 SC 45 P 37 L 3 # 148  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

This editor's note from the 802.3 template should not have been included in the draft.

## SuggestedRemedy

Remove the editor's note.

Response Response Status C

ACCEPT.

CI 45 SC 45 P 37 L 3 # 376  
 Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

Strike the bracketed text as indicate by the following note in the template:  
 "[Notes for editors (not to be included in the published draft - not even D1.0!)]"

## SuggestedRemedy

per comment

Response Response Status W

ACCEPT.

CI 45 SC 45.2.1 P 37 L 11 # 90  
 Mark, Laubach Broadcom Corporation

Comment Type ER Comment Status A EZ

"as appropriate" does not give explicit instructions to the IEEE editors.

## SuggestedRemedy

Replace all uses of "as appropriate" in this clause with explicit instruction to the IEEE editors.

Response Response Status W

ACCEPT.



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1 P 37 L 12 # 149  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-3 is unclear.

## SuggestedRemedy

Change the editing instruction to:

"Change the identified rows in Table 45-3 as follows (unchanged rows not shown):"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1 P 37 L 14 # 38  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

With the addition of 40GBASE-T, middle column "register name" has multiple rows spanning two lines, e.g. "10G/40GBASE-T SNR operating margin channel A", where just a single letter is placed in the second line

## SuggestedRemedy

Extend the width of the middle column to make sure that "10G/40GBASE-T SNR operating margin channel A" (for example)

Also, consider checking font for "10G/40GBASE-T" - it seems to be larger than anything else in the table.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1 P 37 L 17 # 150  
Anslow, Pete Ciena

Comment Type T Comment Status A EZ

All of the entries in the "Subclause" column of Table 45-3 are in forest green but they should be cross-references.

Also, the subclause numbers for register 1.134 through to the end are incorrect. 45.2.1.71 to 45.2.1.83 should be 45.2.1.67 to 45.2.1.79, respectively.

## SuggestedRemedy

Make all of the entries in the "Subclause" column of Table 45-3 cross-references.

Correct the subclause numbers for register 1.134 through to the end.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1 P 37 L 26 # 312  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Subclause numbers 45.2.1.71 thru 45.2.1.83 for register 1.134 through 1.147 in Table 45-3 are not correct.

## SuggestedRemedy

Change subclause numbers as follows:

Register subclause

1.134 45.2.1.67

1.135 45.2.1.68

1.136 45.2.1.69

1.137 45.2.1.70

1.138 45.2.1.71

1.139 45.2.1.72

1.140 45.2.1.73

1.141 45.2.1.74

1.142 45.2.1.75

1.143 45.2.1.76

1.144 45.2.1.77

1.145 through 1.146 45.2.1.78

1.147 45.2.1.79

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.12 P 39 L 37 # 378  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

Are you change rows or inserting rows (only one row is shown in the table)?  
"Change and insert rows in Table 45-16 as appropriate."

## SuggestedRemedy

Change Editing Instruction to read:

"Change row in Table 45-16 as shown."

Response Response Status W

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.12 P 39 L 37 # 14  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction in line 37 is not precise enough.

## SuggestedRemedy

Change "Change and insert rows in Table 45–16 as appropriate." to "Change definition of bit 1.13.6 as shown below"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.12 P 39 L 37 # 157  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction is: "Change and insert rows in Table 45–16 as appropriate." but there is no inserted row

## SuggestedRemedy

Change the editing instruction to:  
"Change the row for 1.13.6 in Table 45–16 as follows (unchanged rows not shown):"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.12.10 P 40 L 1 # 158  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.  
Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:  
"Insert 45.2.1.12.9a after 45.2.1.12.9 as follows:"  
Remove the underline from the new subclause and change it to be 45.2.1.12.9a

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.12.10 P 40 L 2 # 377  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

Subclause number is incorrect:  
45.2.1.12.10 40GBASE-T ability (1.13.6)

## SuggestedRemedy

Change to 45.2.1.12.9a in heading and Editing Instruction.  
(See P802\_3xx\_D0p1\_version\_2p3 pg 15 in 31 for conventions)

Response Response Status W

ACCEPT.

CI 45 SC 45.2.1.12.10 P 40 L 3 # 15  
Hajduczenia, Marek Bright House Networks

Comment Type ER Comment Status A EZ

New subclause 45.2.1.12.10 should be marked as 45.2.1.12.9a and inserted after 45.2.1.12.9 that exists today. Renumbering is done later on by the staff editor when documents are merged.

## SuggestedRemedy

Response Response Status W

ACCEPT. See comment 477

CI 45 SC 45.2.1.6 P 37 L 50 # 151  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-7 is unclear.

## SuggestedRemedy

Change the editing instruction to:  
"Change the identified row in Table 45–7 as follows (unchanged rows not shown):"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 45 SC 45.2.1.6 P 38 L 13 # 153  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The changes to Table 45-7 are not shown correctly.  
The base standard (P802.3bx D3.0) has:  
1 0 0 1 1 x = reserved for future use  
1 0 0 1 0 1 = 40GBASE-ER4 PMA/PMD

*SuggestedRemedy*

Change the draft to show:  
1 0 0 1 1 x1 = reserved for future use  
where the x is in strikethrough and the following 1 is underlined

1 0 0 1 1 0 = 40GBASE-T PMA/PMD  
all underlined

1 0 0 1 0 1 = 40GBASE-ER4 PMA/PMD  
in normal font

Response Response Status C  
ACCEPT.

Cl 45 SC 45.2.1.6 P 38 L 48 # 154  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Footnote a to Table 45-7 is "aR/W = Read/Write, RO = Read only" not as shown.

*SuggestedRemedy*

Change footnote a to:  
"aR/W = Read/Write, RO = Read only"

Response Response Status C  
ACCEPT.

Cl 45 SC 45.2.1.62 P 40 L 11 # 102  
McClellan, Brett Marvell

Comment Type T Comment Status A xGBASE-T

Clause 45 registers and bits should be renamed from '10G/40GBASE-T' to 'xGBASE-T' for simplification and in anticipation of supporting 25G, 2.5G and 5G which will use the same registers. NOTE: Annex 28C has already been modified to use xGBASE-T. See page 27 line 16 Clause 55 was also changed, see page 55.

*SuggestedRemedy*

Replace '10G/40GBASE-T' with 'xGBASE-T' in register and register bit names.  
Replace only in register names and bit names but not in descriptions that include a listing of speeds.  
e.g. do not replace on page 46 line 40.  
Example locations: 45.2.1.62 page 40 lines 11, 13, 23, 28, 41, 45, 49, 51

Response Response Status C  
ACCEPT IN PRINCIPLE.  
Replace 10G/40GBASE-T with "MultiGBASE-T" as commenter describes.  
See comment 6 for definition of MultiGBASE-T

Cl 45 SC 45.2.1.62 P 40 L 13 # 159  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

This is showing a change from:  
"The assignments of in the 10GBASE-T status register is shown in Table 45-54."  
to:  
"The assignments of bits in the 10G/40GBASE-T status registers are shown in Table 45-54."  
However, the change to "registers are" is not appropriate as there is still only one register.  
Same issue in 45.2.1.65, 45.2.7.10 (without change being shown in underline), 45.2.7.11.

*SuggestedRemedy*

Leave the text as "register is" in 45.2.1.62, 45.2.1.65, 45.2.7.10, and 45.2.7.11  
Also, leave as "All the bits in the 10G/40GBASE-T AN status register are read only..." in 45.2.7.11

Response Response Status C  
ACCEPT IN PRINCIPLE.  
Change "registers" to "register" as in comment.  
Verb remains "are" because subject of sentence is not "register", but is "assignments" (assignments ARE shown).

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.62.1 P 40 L 15 # 160  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Editing instructions usually use the term "paragraph" only when particular paragraphs are being modified.

Same issue for 45.2.1.64, 45.2.1.66, 45.2.1.67, 45.2.3.1.2, 45.2.3.13, 45.2.3.13.1, 45.2.3.13.4, 45.2.3.13.5, 45.2.3.14.1, 45.2.3.14.2, 45.2.3.14.3, 45.2.7.10, 45.2.7.11.1, 45.2.7.11.2

#### SuggestedRemedy

Change the editing instruction for 45.2.1.62.1 to:  
"Change text of 45.2.1.62.1 to include 40GBASE-T."

Likewise, change "paragraph" to "text" in the editing instructions for 45.2.1.64, 45.2.1.66, 45.2.1.67, 45.2.3.1.2, 45.2.3.13, 45.2.3.13.1, 45.2.3.13.4, 45.2.3.13.5, 45.2.3.14.1, 45.2.3.14.2, 45.2.3.14.3, 45.2.7.10, 45.2.7.11.1, 45.2.7.11.2

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.62.1 P 40 L 17 # 313  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status R MGMT

The definition of a new field of 1.129.1 is confused and mixed with the definition of an existing field of 1.129.0.

The same problem in Table 45-54.

#### SuggestedRemedy

Change 45.2.1.62.1 as follows:

45.2.1.62.1 40GBASE-T LP information valid (1.129.1)

When read as a one, bit 1.129.1 indicates that the startup protocol defined in 113.4.2.5 has been completed, and that the contents of bits 1.130.11:0, 1.131.15:10, 1.145.14:8, 1.146.14:8, and 1.146.6:0, which are established during the startup protocol, are valid. When read as a zero, bit 1.129.1 indicates that the startup process has not been completed, and that the contents of these bits that are established during the startup protocol are invalid. A 40GBASE-T PMA shall return a value of zero in bit 1.129.1 if PMA link\_status=FAIL.

45.2.1.62.2 10GBASE-T LP information valid (1.129.0)

When read as a one, bit 1.129.0 indicates that the startup protocol defined in 55.4.2.5 has been completed, and that the contents of bits 1.130.11:0, 1.131.15:10, 1.145.14:8, 1.146.14:8, and 1.146.6:0, which are established during the startup protocol, are valid. When read as a zero, bit 1.129.0 indicates that the startup process has not been completed, and that the contents of these bits that are established during the startup protocol are invalid. A 10GBASE-T PMA shall return a value of zero in bit 1.129.0 if PMA link\_status=FAIL.

Change Table 45-54 as follows:

Bit(s)	Name	Description
1.129.15:2	Reserved	(same as before)
1.129.1	40GBASE-T LP information valid	(same as 1.129.0)
1.129.0	10GBASE-T LP information valid	(same as before)

Response Response Status C

REJECT. There is only one link partner at a time so the functionality of LP information valid is combined into one bit for 10G & 40GBASE-T (see comment 316)

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.62.1 P 40 L 18 # 389  
 Remein, Duane Huawei Technologies

Comment Type T Comment Status A EZ

Disagreement in bit designation:  
 Header: 45.2.1.62.1 "... (1.129.0)"  
 Text: "bit 1.129.1"  
 Table 45-54 "1.129.0"

**SuggestedRemedy**

Change text to "1.129.0" so it agrees with header and table.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.62.1 P 40 L 26 # 60  
 Marris, Arthur Cadence

Comment Type T Comment Status A EZ

Editing instruction is wrong as only the table's title has ben changed.

**SuggestedRemedy**

Change  
 Change title and rows and insert row in Table 45–54 as appropriate.  
 To  
 Change title of Table 45–54 as follows.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.62.1 P 40 L 26 # 379  
 Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

Editing instruction is very confusing  
 "Change title and rows and insert row in Table 45–54 as appropriate."

**SuggestedRemedy**

Change to read:  
 "Change title in Table 45–54 as shown.  
 Might also want to drop the actual table which is not being changed as has been done in subsequent sections.

Response Response Status W

ACCEPT IN PRINCIPLE.  
 Change to read "Change title in Table 45-54 as shown."  
 Delete table, and show only title

CI 45 SC 45.2.1.62.1 P 40 L 26 # 161  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction is "Change title and rows and insert row in Table 45–54 as appropriate."  
 The table shows only one of the two rows of Table 45-54 and this is the same as in the base standard.

The title in the base standard is "10GBASE-T status register bit definitions", so the underlined space between "10G/40GBASE-T" and "status" is not correct.

**SuggestedRemedy**

Change the editing instruction to:  
 "Change the title of Table 45–54 as follows:"  
 Leave the title with changemarks and remove the body of the table.  
 Remove the underline from the space between "10G/40GBASE-T" and "status"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.63 P 40 L 39 # 314  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The text above title of 45.2.1.63 refers to 45.2.1.67.

**SuggestedRemedy**

Change the reference to "45.2.1.67" with a reference to "45.2.1.63".

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.63 P 40 L 39 # 393  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Editing Instruction and header number disagree:  
 "Change title 45.2.1.67 to include 40GBASE-T.  
 45.2.1.63 10G/40GBASE-T pair swap and polarity register (Register 1.130)"

**SuggestedRemedy**

Change 45.2.1.67 to 45.2.1.63

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.64.1 P 41 L 13 # 16  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Missing space "are defined in 113.4.2.5and 113.4.5.1"

*SuggestedRemedy*

Change "are defined in 113.4.2.5and 113.4.5.1" to "are defined in 113.4.2.5>> <<and 113.4.5.1"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.64.1 P 41 L 13 # 315  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

A white space is missing between "113.4.2.5" and "and".

*SuggestedRemedy*

Change "113.4.2.5and" with "113.4.2.5 and".

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.64.1 P 41 L 13 # 430  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

missing space between 113.4.2.5 and "and"

*SuggestedRemedy*

insert space after "113.4.2.5"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.64.1 P 41 L 13 # 316  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status R MGMT

Only existing LP information valid bit 1.129.0 is referred.

*SuggestedRemedy*

Change "If LP information valid bit, 1.129.0, is set to one" with  
"If either 10GBASE-T LP information valid bit, 1.129.0, or 40GBASE-T LP information valid bit,  
1.129.1, is set to one".

Response Response Status C

REJECT.

Since there can only be one LP at a time, there is only one LP information valid bit. (see  
comment 313)

CI 45 SC 45.2.1.64.1 P 41 L 13 # 162  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Space missing in "... are defined in 113.4.2.5and ..."

*SuggestedRemedy*

Change to "... are defined in 113.4.2.5 and ..."

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.66 P 41 L 34 # 17  
Hajduczenia, Marek Bright House Networks

Comment Type T Comment Status R Format

Is there any reason for separating 10GBASE-T and 40GBASE-T when in other locations we used "10G/40GBASE-T" to designate them together?

## SuggestedRemedy

Change "10GBASE-T and 40GBASE-T PMAs" to "10G/40GBASE-T PMAs"  
Similar change on page 41, line 43; page 41, line 52; page 42, line 6  
Similarly, "10GBASE-T or 40GBASE-T" should be changed to "10G/40GBASE-T" on page 42, line 31, line 39,

There are also similar instances in 45.2.3.13.4, 45.2.3.13.5, 45.2.3.14 and following subclauses where entries for 40GBASE-T were added.

Response Response Status C

REJECT.  
Rule is that when text refers to a jointly used control or status bit or register (or other joint functional unit) 10G/40G (or xG) is used. When PMAs are referred to, they are specific and distinct, for example, a 10GBASE-T PHY may or may not have a 40GBASE-T functionality - there is no such thing as a single PMA capable of 10G & 40G operation defined in 802.3 (although devices may be built that implement both 10G and 40G PMAs)

CI 45 SC 45.2.1.7 P 37 L 52 # 268  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Superfluous "." in the heading. Similar issue for 45.2.1.8 (p39/l21).

## SuggestedRemedy

Remove extra ".".

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.7 P 37 L 52 # 152  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The title of 45.2.1.7 starts with a ".".  
Same issue for 45.2.1.8 and 45.2.3.9  
(from the autonumber format?)

## SuggestedRemedy

Remove the spurious "." from the titles of 45.2.1.7, 45.2.1.8, and 45.2.3.9

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.7 P 37 L 52 # 39  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

".PMA/PMD status 2 register (Register 1.8)" contains "." at the beginning of heading

## SuggestedRemedy

Remove "." in the heading.  
Also, remove "." at the start of editorial instruction on page 38 line 53, page 39 line 21

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.7.4 P 38 L 52 # 392  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Stray period in front of Editing Instruction:  
".Insert row in Table 45-9 as appropriate."  
^

## SuggestedRemedy

Strike the errant period.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.7.4 P 38 L 53 # 155  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instructions for Table 45-9, Table 45-10, and Table 45-12 are unclear. The place the new rows are to be inserted should be included.  
Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instructions to:  
"Insert a row for 40GBASE-T below the row for 40GBASE-FR in Table 45-9 as follows (unchanged rows not shown):"  
"Insert a row for 40GBASE-T below the row for 40GBASE-FR in Table 45-10 as follows (unchanged rows not shown):"  
"Insert a row for 40GBASE-T below the row for 40GBASE-FR in Table 45-12 as follows (unchanged rows not shown):"  
, respectively.  
Remove the underline from the new rows.

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.7.4 P 38 L 53 # 11  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Insert row in Table 45–9 as appropriate." is not precise enough.

## SuggestedRemedy

Change editorial instruction to read: "Insert row in Table 45–9 under 40GBASE-FR entry"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.7.5 P 39 L 10 # 12  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Insert row in Table 45–10 as appropriate." is not precise enough.

## SuggestedRemedy

Change editorial instruction to read: "Insert row in Table 45–10 under 40GBASE-FR entry"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.7.8 P 42 L 16 # 163  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The title of Table 45-58 in the base standard is: "10GBASE-T skew delay register bit definitions" so the "definitions" has got lost

## SuggestedRemedy

add "definitions" in normal font to the end of the title for Table 45-58

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.79.1 P 42 L 30 # 420  
Zimmerman, George CME Consulting

Comment Type ER Comment Status A EZ

Missing reference for fr\_rx\_counter and fr\_tx\_counter in 40GBASE-T, clause 113

## SuggestedRemedy

insert after 55.4.5.1 references in both line 30 (45.2.1.79.1) and 38 (45.2.1.79.2):  
"for 10GBASE-T, and 113.4.5.4 for 40GBASE-T."

Response Response Status W

ACCEPT.

CI 45 SC 45.2.1.8 P 39 L 21 # 99  
McClellan, Brett Marvell

Comment Type E Comment Status A EZ

extra period before 'PMD'

## SuggestedRemedy

remove extra period before 'PMD'

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.8.1 P 39 L 23 # 156  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The draft includes a heading for 45.2.1.8.1 above the editing instruction for Table 45-12.  
However, this table is in 45.2.1.8 and not 45.2.1.8.1, so the heading is not required.

## SuggestedRemedy

Remove the heading for 45.2.1.8.1

Response Response Status C

ACCEPT.



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.1.8.1 P 39 L 25 # 13  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Insert row in Table 45–12 as appropriate." is not precise enough.

## SuggestedRemedy

Reconcile Change editorial instruction to read: "Insert row in Table 45–12 under 40GBASE-FR entry"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3 P 42 L 44 # 164  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-119 is unclear.

## SuggestedRemedy

Change the editing instruction to:  
"Change the rows for registers 3.32 and 3.33 in Table 45–119 as follows (unchanged rows not shown):"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3 P 42 L 50 # 165  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Both of the entries in the "Subclause" column of Table 45-119 are in forest green but they should be cross-references.

Also, the subclause numbers are incorrect.

Register 3.32 is defined in 45.2.3.13

Register 3.33 is defined in 45.2.3.14

## SuggestedRemedy

Make both of the entries in the "Subclause" column of Table 45-119 cross-references to the correct subclause numbers

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.1.2 P 43 L 7 # 166  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The IEEE Editorial Style Manual includes:

"In a series of three or more terms, use a comma immediately before the coordinating conjunction (usually and, or, or nor)."

Consequently, "... the 40GBASE-T, 10GBASE-T or the 10GBASE-R mode ..." should have an extra comma after "10GBASE-T"

## SuggestedRemedy

Change:

"... the 40GBASE-T, 10GBASE-T or the 10GBASE-R mode ..." to:

"... the 40GBASE-T, 10GBASE-T, or the 10GBASE-R mode ..."

with the added comma in underline font.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.13 P 44 L 39 # 349  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Editing Instructions should be consistent:

"Change paragraph of 45.2.3.13 ..."

Same issue in 45.2.3.13.1, 45.2.3.13.4, 45.2.3.13.5, & 45.2.3.14

## SuggestedRemedy

Change to read:

"Change title and paragraph of 45.2.3.13 ..."

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 45 SC 45.2.3.13 P 44 L 46 # 22  
Hajduczenia, Marek Bright House Networks

Comment Type ER Comment Status A MGMT

Some of the marked change make little sense: "BASE-R, and 10GBASE-T, or 40GBASE-T",  
or "when the BASE-R PCS or the 10GBASE-T or the 40GBASE-T PCS "

## SuggestedRemedy

Change "when the BASE-R PCS or the 10GBASE-T or the 40GBASE-T PCS " to read "when  
the BASE-R PCS, 10GBASE-T, or the 40GBASE-T PCS " - use proper markup  
Change "BASE-R, 10GBASE-T, or 40GBASE-T" - use proper markup

Response Response Status W  
ACCEPT.

CI 45 SC 45.2.3.13 P 45 L 1 # 172  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-128 is unclear.  
Also, the table title has been changed

## SuggestedRemedy

Change the editing instruction to:  
"Change the title and identified rows in Table 45-128 as follows (unchanged rows not shown):"

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.13 P 45 L 10 # 431  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Table 45-128 description of bit 3.32.12 should insert new text before "PCS", not after.

## SuggestedRemedy

Change "0 - BASE-R or 10GBASE-T PCS or 40GBASE-T receive..." to  
""0 - BASE-R or 10GBASE-T or 40GBASE-T PCS receive..."

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.14 P 46 L 20 # 174  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-129 is unclear.  
Also, the insertion in the table title has not been underlined

## SuggestedRemedy

Change the editing instruction to:  
"Change the title and identified rows in Table 45-129 as follows (unchanged rows not shown):"  
show "/40G" in the table title in underline font.

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.14 P 46 L 22 # 350  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Title for Table 45-129 does not appear to have change marking (may just be a frame issue but  
should be fixed)

## SuggestedRemedy

Show mark-up in title.

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.14 P 46 L 22 # 23  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

"Change title and rows in Table 45-129 as appropriate." - no change in title is shown.

## SuggestedRemedy

Show change in title of Table 45-129

Response Response Status C  
ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 45 SC 45.2.3.14 P 46 L 25 # 24  
Hajduczenia, Marek Bright House Networks

Comment Type T Comment Status R Format

In Table 45-129, there are multiple instances of "10GBASE-T or 40GBASE-T ". Following other changes in Clause 45, text "10GBASE-T or 40GBASE-T " should be "10/40GBASE-T" since the statements are applicable to 10GBASE-T and 40GBASE-T alike

## SuggestedRemedy

Change "10GBASE-T or 40GBASE-T " to "10G/40GBASE-T in Table 45-129. Consider applying similar changes in other locations in Clause 45, where similar text exists.

Response Response Status C

REJECT. See comment 17

Cl 45 SC 45.2.3.14.3 P 47 L 16 # 108  
Cibula, Peter Intel Corporation

Comment Type E Comment Status A EZ

Punctuation - The title of the subclause is missing a space.

## SuggestedRemedy

Change "45.2.3.14.3 BER(3.33.13:8)" to "45.2.3.14.3 BER (3.33.13:8)", inserting a space between "BER" and "(3.33.13:8)"

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.3.14.3 P 47 L 19 # 366  
Remoin, Duane Huawei Technologies

Comment Type E Comment Status A EZ

lfer\_count is referred to as a variable. while it is defined as a counter a counter

The same issues appears in 45.2.3.14.4 pg 47 In 29 for errored\_block\_count

## SuggestedRemedy

change  
"defined by the lfer\_count variable"  
to  
"defined by counter lfer\_count"

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.3.14.3 P 47 L 19 # 432  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Missing reference to clause 113.

## SuggestedRemedy

Change, "lfer\_count variable in 55.3.6.2 for 10G/40GBASE-T." to  
"lfer\_count variable in 55.3.6.2 for 10GBASE-T and in 113.3.6.2.2 for 40GBASE-T."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 366

Cl 45 SC 45.2.3.14.4 P 47 L 30 # 25  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

missing "for" in newly added text "and in 113.3.6.2 40GBASE-T"

## SuggestedRemedy

Change "and in 113.3.6.2 40GBASE-T" to "and in 113.3.6.2 >>for<< 40GBASE-T"

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.3.7 P 43 L 29 # 167  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The heading for 45.2.3.7 appears just above Table 45-123, but Table 45-123 (related to the PCS control 2 register) is in 45.2.3.6

## SuggestedRemedy

Insert the heading:  
45.2.3.6 PCS control 2 register (Register 3.7)  
and move Table 45-123 to be below the new heading, leaving Table 45-124 in 45.2.3.7

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.3.7 P 43 L 38 # 394  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A Format

Change marking in Table 45-123 indicate that the "2 1 0" at top of description are being added (they are underlined). This is not the case.

## SuggestedRemedy

Remove underlining of the "2 1 0" header.

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Align with the 802.3bx resolution of similar comment.

After review of the current 802.3 revision draft (802.3bx) and the text of IEEE 802.3-2012, the "2 1 0" header in the base standard is underlined, not to indicate a change, but to make it clear that these are column headers identifying bits in a multi-bit code, consistent with use in the base standard – hence the underlining should be retained.

CI 45 SC 45.2.3.7 P 43 L 49 # 18  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Change row and insert row in Table 45–124 as appropriate." is not precise enough

## SuggestedRemedy

Change "Change row and insert row in Table 45–124 as appropriate." to read "Change definition of bits 3.8.9:7 in Table 45-124 as show below"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.7 P 43 L 49 # 168  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-124 is unclear.

## SuggestedRemedy

Change the editing instruction to:  
 "Change the identified reserved row in Table 45–124 and insert a new row for bit 3.8.6 below it as follows (unchanged rows not shown):"  
 Remove the underline from the new row as it is associated with an "insert" editing instruction.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.7 P 43 L 51 # 169  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Correctly formatted tables do not allow the table title to be on a different page from the table body.

## SuggestedRemedy

Use the correct IEEE table format (in the Table Designer pod, set "Title" to "Above Table").  
 Check that this is the case for all Clause 45 tables.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.7.6 P 44 L 10 # 170  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.  
 Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:  
 "Insert 45.2.3.7.5a after 45.2.3.7.5 as follows:"  
 Remove the underline from the new subclause and change it to be 45.2.3.7.5a

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.7.6 P 44 L 10 # 395  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

An inserted subclause after 45.2.3.7.5 should be designated 45.2.3.7.5a not 45.2.3.7.6 per template.  
 Inserted text should not be underlined.

## SuggestedRemedy

Change to 45.2.3.7.5a in header and Editing Instruction.  
 Remove underline

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.3.7.6 P 44 L 12 # 19  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

New subclause 45.2.3.7.6 should be marked as 45.2.3.7.5a and inserted after 45.2.3.7.5 that exists today. Renumbering is done later on by the staff editor when documents are merged.

SuggestedRemedy

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.9 P 44 L 17 # 396  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Errant period:  
"45.2.3.9 .EEE ..."  
^

Also you are not changing rows but a row

SuggestedRemedy

Remove period  
Change Editing Instruction to "Change row in ..."

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.9 P 44 L 18 # 100  
McClellan, Brett Marvell

Comment Type E Comment Status A EZ

extra period before EEE

SuggestedRemedy

delete extra period before EEE

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.9 P 44 L 18 # 111  
Cibula, Peter Intel Corporation

Comment Type E Comment Status A EZ

Punctuation - There is a stray period/full stop in the subclause title.

SuggestedRemedy

Change "45.2.3.9 .EEE control and capability (Register 3.20)" to "45.2.3.9 EEE control and capability (Register 3.20)", removing the period before EEE.

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.9 P 44 L 19 # 171  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-125 is unclear.  
"3.20.7" and "RO" are not changed, so should not be underlined

SuggestedRemedy

Change the editing instruction to:  
"Change the identified reserved row in Table 45-125 as follows (unchanged rows not shown):"  
Remove the underline from "3.20.7" and "RO"

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.3.9 P 44 L 20 # 20  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Eitorial instruction "Change rows in Table 45-125 as appropriate." is not precise enough

SuggestedRemedy

Change "Change rows in Table 45-125 as appropriate." to read "Change definition of bit 3.20.7 in Table 45-125 as shown below"

Response Response Status C  
ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 45 SC 45.2.3.9.8 P 44 L 33 # 173  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:

"Insert 45.2.3.9.7a after 45.2.3.9.7 as follows:"

Remove the underline from the new subclause and change it to be 45.2.3.9.7a

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.9.8 P 44 L 33 # 317  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The new paragraph 45.2.3.9.8 for 3.20.7 should be inserted after 45.2.3.9.4.

## SuggestedRemedy

Change the reference to "45.2.3.9.7" on line 33 with "45.2.3.9.4".

Change the subclause number "45.2.3.9.8" on line 35 with "45.2.3.9.5".

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.9.8 P 44 L 35 # 21  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

New subclause 45.2.3.9.8 should be marked as 45.2.3.9.7a and inserted after 45.2.3.9.7 that exists today. Renumbering is done later on by the staff editor when documents are merged.

## SuggestedRemedy

Update the editorial instruction accordingly.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.3.9.8 P 44 L 35 # 348  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Should be 45.2.3.9.7a not 45.2.3.9.8 in both header and Editing Instruction.

## SuggestedRemedy

per comment

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7 P 47 L 37 # 351  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

The title of the table does not appear to be changed:  
"Change title and rows in Table 45–200 as appropriate."

There appear to be several references in the table to 45.2.7.10

## SuggestedRemedy

Change to read:

"Change rows in Table 45–200 as shown."

Remove excess references.

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7 P 47 L 37 # 175  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-200 is unclear.  
Also, the entries in the subclause column need fixing

## SuggestedRemedy

Change the editing instruction to:

"Change the identified rows in Table 45–200 as follows (unchanged rows not shown):"

Remove the spurious forest green text from the row for 7.32

Make 45.2.7.11 in the 7.33 row a cross-reference

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7 P 47 L 43 # 26  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Register 7.32 in Table 45–200 seems to have multiple subclause references "45.2.7.1045.2.7.1045.2.7.1045.2.7.10" which are repeated entries for "45.2.7.10"

*SuggestedRemedy*

Replace existing subclause reference with "45.2.7.10" marked in black and make it live.

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.7 P 47 L 46 # 27  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Subclause 45.2.7.11 exists in this draft and should be marked in black.

*SuggestedRemedy*

Mark "45.2.7.11" in black and make link live.

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.7.10 P 48 L 30 # 380  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

Editing Instructions pointing to incorrect subclauses and headers missing section numbers:  
"Insert new paragraph after 45.2.7.10.3 ..."  
"40GBASE-T capability (7.32.11)"

"Insert new paragraph after 45.2.7.10.6 ..."  
40GBASE-T Fast retrain ability (7.32.3)

"Change title 45.2.7.10.6. Re-number to 45.2.7.10.8."  
10GBASE-T Fast retrain ability (7.32.1)  
10GBASE-T Fast retrain ability (7.32.1)

*SuggestedRemedy*

Change to:  
"Insert new paragraph after 45.2.7.10.4 as shown."  
"45.2.7.10.4a 40GBASE-T capability (7.32.11)"  
bla bla bla

"45.2.7.10.4b 40GBASE-T Fast retrain ability (7.32.3)"  
bla bla bla

"Change title 45.2.7.10.6. (renumbered due to above);"  
45.2.7.10.6 10GBASE-T Fast retrain ability (7.32.1)

Response Response Status W  
ACCEPT.

CI 45 SC 45.2.7.10 P 48 L 32 # 29  
Hajduczenia, Marek Bright House Networks

Comment Type ER Comment Status A EZ

Missing numbers for headings on page 48, lines: 32, 39, 50,

*SuggestedRemedy*

Insert number 45.2.7.10.3a on page 48, like 32  
Insert number 45.2.7.10.5a on page 48, like 39 (7.32.3 goes before 7.32.2 and not after it)  
Change editorial instruction "Change title 45.2.7.10.6. Re-number to 45.2.7.10.8." to read  
"Change title 45.2.7.10.6 as shown below"

Response Response Status W  
ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7.10 P 48 L 9 # 28  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Change title and rows and insert rows in Table 45–207 as appropriate." is not precise enough

## SuggestedRemedy

Change "Change title and rows and insert rows in Table 45–207 as appropriate." to read "Change rows 7.32.11:3 and 7.32.11.1 in Table 45–207 as shown below."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 176

CI 45 SC 45.2.7.10 P 48 L 9 # 176  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-207 is unclear.

Also, the text in the reserved row has been changed in 802.3bx D3.0

## SuggestedRemedy

Change the editing instruction to:  
"Change the reserved row and the row for 7.32.1 in Table 45–207 and insert new rows for 7.32.11 and 7.32.3 above and below the reserved row, respectively as follows (unchanged rows not shown):"  
Delete ", writes ignored" from the reserved row.  
Remove the underline from the two new rows (insert editing instruction).

Response Response Status C

ACCEPT. See comment 28

CI 45 SC 45.2.7.10.4 P 48 L 30 # 177  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

"after 45.2.7.10.3" should be "after 45.2.7.10.4"

The new subclause titles should match the name in Table 45-207.

"Bit 7.32.11 is to be used ..." is inappropriate wording.

The new subclause for bit 7.32.3 goes immediately below that for bit 7.32.11.

Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the first editing instruction to:

"Insert 45.2.7.10.4a and 45.2.7.10.4a after 45.2.7.10.4 as follows:"

Remove the underline from the new subclauses.

Change the first new subclause title to be:

"45.2.7.10.4a 40GBASE-T ability (7.32.11)"

Change ""Bit 7.32.11 is to be used ..." to ""Bit 7.32.11 is used ..."

Delete the editing instruction:

"Insert new paragraph after 45.2.7.10.6 and re-number remaining clauses accordingly."

Change the second new subclause title to be:

"45.2.7.10.4b 40GBASE-T Fast retrain ability (7.32.3)"

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7.10.5 P 48 L 30 # 318  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The new two paragraphs for 7.32.11 and 7.32.3 should be inserted after 45.2.7.10.4 and the clause numbers are missing.

## SuggestedRemedy

Change "Insert new paragraph after 45.2.7.10.3" on line 30 with "Insert two new paragraphs after 45.2.7.10.4".

Insert clause number "45.2.7.10.5" at the beginning of line 32.

Remove the note of "Insert new paragraph after 45.2.7.10.6 and re-number remaining clauses accordingly." on line 38.

Insert clause number "45.2.7.10.6" at the beginning of line 40.

Insert clause number "45.2.7.10.8" at the beginning of line 48.

Response Response Status C

ACCEPT.



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7.10.5 P 48 L 36 # 319  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EZ  
Reference to bit 7.32.12 should be 7.32.11.

*SuggestedRemedy*

Change "7.32.12" on line 36 with "7.32.11".

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.7.10.6 P 48 L 46 # 178  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ  
Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

*SuggestedRemedy*

Change the editing instruction to:  
"Change the title of 45.2.7.10.6 as follows:"  
add "45.2.7.10.6" to the beginning of the modified title.

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.7.11 P 49 L 20 # 179  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ  
In the row for bit 7.33.0 in Table 45-208, "7.33.0" and "RO" have not changed, so should not be underlined. Also, ", writes ignored" has been removed in 802.3bx D3.0

*SuggestedRemedy*

Remove the underline from "7.33.0" and "RO"  
Remove the strikethrough text ", writes ignored"

Response Response Status C  
ACCEPT.

CI 45 SC 45.2.7.11 P 49 L 34 # 433  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ  
typo - "in" should be "is"

*SuggestedRemedy*

change "40GBASE-T in contained" to "40GBASE-T is contained"

Response Response Status C  
ACCEPT. Dup of comment 180

CI 45 SC 45.2.7.11 P 49 L 6 # 352  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ  
Stray period.  
".Change title and rows in Table 45–208 as appropriate."  
^

*SuggestedRemedy*

strike.

Response Response Status C  
ACCEPT IN PRINCIPLE. See comment 30 for more complete response.

CI 45 SC 45.2.7.11 P 49 L 6 # 30  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ  
Editorial instruction ".Change title and rows in Table 45–208 as appropriate." is not precise enough.

*SuggestedRemedy*

Change ".Change title and rows in Table 45–208 as appropriate." to "Change title of Table 45-208 and definition of rows 7.33.8:2, 7.33.1, and 7.33.0 as shown below."

Response Response Status C  
ACCEPT. See comment 352

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7.11.1 P 49 L 34 # 180  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

"for 40GBASE-T in contained" should be "for 40GBASE-T is contained"

## SuggestedRemedy

Change "for 40GBASE-T in contained" to "for 40GBASE-T is contained"

Response Response Status C

ACCEPT. Dup of comment 433

CI 45 SC 45.2.7.11.10 P 50 L 16 # 184  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

"55.4.2.5.15" should be in forest green.

## SuggestedRemedy

Leave the numbering of 45.2.7.11.8 as it is.

Change the editing instruction to:

"Change the title and text of 45.2.7.11.8 as follows:"

Apply character tag "External" to "55.4.2.5.15"

Response Response Status C

ACCEPT. See comments 353, 31, 33

CI 45 SC 45.2.7.11.10 P 50 L 16 # 33  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Change paragraph 45.2.7.11.8 and re-number to 45.2.7.11.10 in consideration of newly inserted 45.7.11.7 and 45.2.7.11.9." is incorrect

## SuggestedRemedy

Change "Change paragraph 45.2.7.11.8 and re-number to 45.2.7.11.10 in consideration of newly inserted 45.7.11.7 and 45.2.7.11.9." to read "Change title and content of 45.2.7.11.8 as shown below."

Response Response Status C

ACCEPT. See comments 353, 184

CI 45 SC 45.2.7.11.2 P 49 L 49 # 181  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The text of 45.2.7.11.2 is truncated

## SuggestedRemedy

Reinstate the remainder of the text

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7.11.6 P 50 L 1 # 353  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Inserted para numbering incorrect

"Insert new paragraph after 45.2.7.11.6 ..."

"45.2.7.11.7 Link partner 40GBASE-T capability (7.33.8)"

Also:

"45.2.7.11.9 40GBASE-T Fast retrain ability (7.33.0)"

"45.2.7.11.10 10GBASE-T Fast retrain ability (7.33.1)"

## SuggestedRemedy

Change 45.2.7.11.7 to 45.2.7.11.6a

Change 45.2.7.11.9 to 45.2.7.11.7a

Change 45.2.7.11.10 to 45.2.7.11.7b

Response Response Status C

ACCEPT. See comments 31, 33, 184

CI 45 SC 45.2.7.11.7 P 49 L 51 # 182  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

"after 45.2.7.11.6" should be "after 45.2.7.11.7"

Also, the only editing instruction that uses underline or strikethrough font is "Change"

## SuggestedRemedy

Change the editing instruction to:

"Insert 45.2.7.11.7a after 45.2.7.11.7 as follows:"

Remove the underline from the new subclause and change it to be 45.2.7.11.7a

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7.11.7 P 49 L 51 # 320  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

New paragraph for 7.33.8 should be inserted after 45.2.7.11.7 instead of after 45.2.7.11.6.

## SuggestedRemedy

Change reference to "45.2.7.11.6" on line 51 in page 49 with "45.2.7.11.7".

Change clause number "45.2.7.11.7" on line 1 in page 50 with "45.2.7.11.8".

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7.11.7 P 50 L 1 # 31  
Hajduczenia, Marek Bright House Networks

Comment Type ER Comment Status A EZ

Subclause 45.2.7.11.7 should be 45.2.7.11.6a - any renumbering necessary is typically done by staff editor when merging with base document

## SuggestedRemedy

Change 45.2.7.11.7 to 45.2.7.11.6a in editorial instruction (page 49, line 51) and in title - page 50, line 1

Response Response Status W

ACCEPT IN PRINCIPLE. See comments 353, 184

Change 45.2.7.11.8 to 45.2.7.11.7a in clause title. No change to editorial instruction.

CI 45 SC 45.2.7.11.7 P 50 L 3 # 434  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

typo "in is"

## SuggestedRemedy

delete "in"

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 193

CI 45 SC 45.2.7.11.7 P 50 L 3 # 321  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

"in" after "bit 7.1.6" does not make sense.

## SuggestedRemedy

Remove "in" after "bit 7.1.6".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 193

CI 45 SC 45.2.7.11.7 P 50 L 4 # 421  
Zimmerman, George CME Consulting

Comment Type T Comment Status A MGMT

Incorrect bit referenced in paragraph

## SuggestedRemedy

Change 7.33.11 to 7.33.8

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7.11.9 P 50 L 7 # 183  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Bit 7.33.0 should come after bit 7.33.1 in the draft.

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

## SuggestedRemedy

Change the editing instruction to:

"Insert 45.2.7.11.9 after 45.2.7.11.8 as follows:"

Remove the underline from the new subclause and move both the editing instruction and subclause below "10GBASE-T Fast retrain ability (7.33.1)"

Response Response Status C

ACCEPT. See comment 32

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7.11.9 P 50 L 7 # 32  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Insert new paragraph after 45.2.7.11.7 and re-number remaining clauses accordingly and in consideration with newly inserted 45.7.11.7." is not precise enough.

## SuggestedRemedy

Since we are inserting a new subclause at the end covering register 7.33.0, instruction ought to read as follows: "Insert new paragraph 45.2.7.11.9 as shown below." - anything else is unnecessary

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 183

CI 45 SC 45.2.7.11.9 P 50 L 7 # 322  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

New paragraph for 7.33.0 should be inserted after the paragraph for 7.33.1.

## SuggestedRemedy

Change line 7 through 23 in page 50 as follows:

Change paragraph 45.2.7.11.8 and re-number to 45.2.7.11.9 and insert new paragraph 45.2.7.11.10 in consideration of newly inserted 45.2.7.11.8.

45.2.7.11.9 10GBASE-T Fast retrain ability (7.33.1)

When read as a one, bit 7.33.1 is used to indicate that the link partner has the ability to support the 10GBASE-T fast retrain capability as specified in 55.4.2.5.15. When read as a zero, bit 7.33.1 indicates that the PHY lacks the ability to support the 10GBASE-T fast retrain capability.

45.2.7.11.10 40GBASE-T Fast retrain ability (7.33.0)

When read as a one, bit 7.33.0 is used to indicate that the link partner has the ability to support the 40GBASE-T fast retrain capability as specified in 113.4.2.5.15. When read as a zero, bit 7.33.0 indicates that the PHY lacks the ability to support the 40GBASE-T fast retrain capability.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 183

CI 45 SC 45.2.7.13 P 50 L 29 # 185  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Spurious "." at the start of the text.

## SuggestedRemedy

Change ".This" to "This"

Response Response Status C

ACCEPT. Dup of comments 34, 101

CI 45 SC 45.2.7.13 P 50 L 29 # 34  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Unnecessary "." at beginning of page 50, line 29

## SuggestedRemedy

Remove "."

Response Response Status C

ACCEPT. Dup of comments 185, 101

CI 45 SC 45.2.7.13 P 50 L 29 # 101  
McClellan, Brett Marvell

Comment Type E Comment Status A EZ

extra period before 'This'

## SuggestedRemedy

delete extra period before 'This'

Response Response Status C

ACCEPT. Dup of comments 34, 185

CI 45 SC 45.2.7.13 P 51 L 1 # 35  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Imprecise editorial instruction "Change rows in Table 45–210 as appropriate.."

## SuggestedRemedy

Change "Change rows in Table 45–210 as appropriate.." to read "Change row 7.60.9 in Table 45-210 as shown below."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 186

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 45 SC 45.2.7.13 P 51 L 1 # 186  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instruction for Table 45-210 is unclear.  
Also, the text in the reserved row has been changed in 802.3bx D3.0

*SuggestedRemedy*

Change the editing instruction to:  
"Change the row for 7.60.9 in Table 45-210 as follows (unchanged rows not shown):"  
Delete ", writes ignored" in strikethrough font from the reserved row.

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.7.13 P 51 L 1 # 354  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Only changing one row and excessive use of periods  
"Change rows in Table 45-210 as appropriate."  
^^

*SuggestedRemedy*

Change to "Change row in Table 45-210 as appropriate."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 186

Cl 45 SC 45.2.7.13.10 P 51 L 16 # 323  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

New paragraph for 7.60.9 should be inserted after 45.2.7.13.4 instead of after 45.2.7.13.9.

*SuggestedRemedy*

Change reference to "45.2.7.13.9" on line 16 with "45.2.7.13.4".

Change clause number "45.2.7.13.10" on lin 18 with "45.2.7.13.5".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 355

Cl 45 SC 45.2.7.13.10 P 51 L 16 # 36  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction "Insert new paragraph after 45.2.7.13.9 and re-number remaining clauses accordingly." is imprecise

*SuggestedRemedy*

Change "Insert new paragraph after 45.2.7.13.9 and re-number remaining clauses accordingly." to read "Insert new paragraph after 45.2.7.13.4 as shown below."  
Change 45.2.7.13.4 to 45.2.7.13.4a

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 355 for more complete remedy

Cl 45 SC 45.2.7.13.10 P 51 L 16 # 355  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Incorrect inserted para number:  
"Insert new paragraph after 45.2.7.13.9 and re-number remaining clauses accordingly.  
45.2.7.13.10 40GBASE-T EEE supported (7.60.9)"  
Excessive use of underlined (not needed for inserts)

*SuggestedRemedy*

Change 45.2.7.13.9 to 45.2.7.13.4 in Editing Instruction  
Change 45.2.7.13.10 to 45.2.7.13.4a in header  
Remove underlining

Response Response Status C

ACCEPT.

Cl 45 SC 45.2.7.13.10 P 51 L 23 # 356  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Only changing one row:  
"Change rows in Table 45-211 ..."

*SuggestedRemedy*

Change rows to row

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 188

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.2.7.13.10 P 51 L 23 # 37  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Incorrect editorial instruction "Change rows in Table 45–211 as appropriate."

## SuggestedRemedy

Change "Change rows in Table 45–211 as appropriate. to read "Change row 7.61.9 in Table 45-211 as shown below."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 188

CI 45 SC 45.2.7.13.10 P 51 L 70 # 187  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Because of the large number of simultaneous amendments being done to 802.3 at any one time re-numbering clauses is a bad idea.

Bit 7.60.9 should be described after bit 7.60.10 (45.2.7.13.4)

## SuggestedRemedy

Change the editing instruction to:

"Insert 45.2.7.13.4a after 45.2.7.13.4 as follows:"

Remove the underline from the new subclause and change it to be 45.2.7.13.4a

Response Response Status C

ACCEPT.

CI 45 SC 45.2.7.14 P 51 L 24 # 188  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Table 45-211 is in 45.2.7.14 but this heading is missing.

The editing instruction for Table 45-210 is unclear.

When "Reserved" is deleted, the Name column will be blank.

The text in the reserved row has been changed in 802.3bx D3.0

"28.2.3.4.128" does not exist

Footnote a should be "RO = Read only"

## SuggestedRemedy

Add a heading for 45.2.7.14.

Change the editing instruction to:

"Change the row for 7.61.9 in Table 45–211 as follows (unchanged rows not shown):"

Add "40GBASE-T EEE" to the Name column

Delete ", writes ignored" in strikethrough font from the reserved row.

Correct the cross-reference to Clause 28

Change footnote a to "RO = Read only"

Response Response Status C

ACCEPT.

CI 45 SC 45.5 P 52 L 14 # 435  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Missing references on AM61 and AM62

## SuggestedRemedy

Insert cross references to 45.2.7.10, 10G/40GBASE-T AN control register.

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 45 SC 45.5 P 52 L 4 # 190  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editing instructions are not appropriate.

## SuggestedRemedy

Change 45.5.3.2 editing instruction to:

"Insert a new row for \*40T below the row for \*10T in the table in 45.5.3.2 as follows (unchanged rows not shown):"

Remove the underline from the new row.

Change 45.5.3.6 editing instruction to:

"Change the row for \*CT in the table in 45.5.3.6 as follows (unchanged rows not shown):"

Change 45.5.3.7 editing instruction to:

"Change the rows for RM15, RM16, and RM37 through RM40 in the table in 45.5.3.7 as follows (unchanged rows not shown):"

Change 45.5.3.8 editing instruction to:

"Change the row for \*AT in the table in 45.5.3.8 as follows (unchanged rows not shown):"

Change 45.5.3.9 editing instruction to:

"Change the row for AM51 in the table in 45.5.3.9 and insert new rows for AM61 and AM62 at the end of the table as follows (unchanged rows not shown):"

Remove the underline from the AM61 and AM62 rows.

Response Response Status C

ACCEPT.

CI 45 SC 45.5 P 52 L 4 # 357  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

More rows of "rows" that should be rows or "row"

Pg In

52 4

52 13

53 1

Isn't editing CI 45 a pain? This too shall pass :-)

## SuggestedRemedy

per comment

Response Response Status C

ACCEPT.

CI 45 SC 45.5 P 52 L 9 # 191  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Many of the cross-references in 45.5 are shown in green, but should be active cross-references.

In 45.5.3.2, "45.2.1.8" is the "PMD transmit disable register". "45.2.1.12" seems to be a better place to point to as this is where the 40GBASE-T ability bit resides.

In 45.5.3.9, there should be entries in the subclause column for AM61 and AM62.

## SuggestedRemedy

In 45.5.3.2, change "45.2.1.8" to "45.2.1.12" and make it a cross-reference.

In 45.5.3.6, make "45.2.3" a cross-reference.

In 45.5.3.7, make "45.2.13" (2 instances) and "45.2.14" (2 instances) cross-references.

In 45.5.3.8, make "45.2.7" a cross-reference.

In 45.5.3.9, make "45.2.7.11.1" a cross-reference and add cross-references to "45.2.7.10" to the AM61 and AM62 rows.

Response Response Status C

ACCEPT.

CI 45 SC 45.5.3.2 P 52 L 4 # 189  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Headings in 45.5 are missing and table heading rows are not shown

## SuggestedRemedy

Add headings for:

45.5.3

45.5.3.2

45.5.3.6

45.5.3.7

45.5.3.9

Show the heading rows for the various tables.

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 45 SC 45.5.3.7 P 52 L 30 # 192  
Anslow, Pete Ciena

Comment Type T Comment Status A EZ

RM16 says "Loopback bit returns zero when operating at 10 Gb/s with port type selections other than 10GBASE-R or 10GBASE-T or 40GBASE-T". Now that 40GBASE-T has been added, "at 10 Gb/s" is no longer correct.

**SuggestedRemedy**

Change "when operating at 10 Gb/s" to "when operating at 10 Gb/s or 40 Gb/s"

Response Response Status C

ACCEPT.

Cl 47 SC 45.2.7.11.7 P 50 L 3 # 193  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

This says "The bit is only valid when page receive bit 7.1.6 in is set to one."  
"The bit" would be better as "Bit 7.33.8"  
"page receive bit 7.1.6" should be "page received bit 7.1.6"  
spurious "in" after "7.1.6"

**SuggestedRemedy**

Change:  
"The bit is only valid when page receive bit 7.1.6 in is set to one." to:  
"Bit 7.33.8 is only valid when page received bit 7.1.6 is set to one."

Response Response Status C

ACCEPT. See comment 321

Cl 55 SC 55 P 55 L 1 # 103  
McClellan, Brett Marvell

Comment Type TR Comment Status A Training

In November the Maintenance task force considered a maintenance request to remove the 10GBASE-T periodic training. The task force forwarded the request to the 802.3bq task force for consideration.

[http://www.ieee802.org/3/maint/requests/maint\\_1266.pdf](http://www.ieee802.org/3/maint/requests/maint_1266.pdf)  
[http://www.ieee802.org/3/maint/requests/revision\\_history.html#REQ1266](http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1266)

**SuggestedRemedy**

Implement the changes to Clauses 45 and 55 as detailed in  
[http://www.ieee802.org/3/maint/requests/maint\\_1266.pdf](http://www.ieee802.org/3/maint/requests/maint_1266.pdf) as part of 802.3bq.  
In addition, in 55.4.2.5.15 Fast retrain function  
delete text "The training sequence without periodic re-initialization described in 55.3.4 shall be used during fast retraining, with the scramblers free-running from PCS Reset. If scrambler re-initialization is used for normal training, it shall be disabled and the scramblers shall begin free-running when the PHY Control state diagram enters the PCS\_Test state and the variable fr\_active is FALSE."

Response Response Status C

ACCEPT.

Cl 55 SC 55.6.2 P 55 L 13 # 324  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A xGBASE-T

I do not agree to use abbreviation of xGBASE-T, because there are many xGBASE-T to be defined in near future, and it is not clear which xGBASE-T will be included.

I think it is safe to consider for each description for each technology rather than just using abbreviation.

If we are motivated to use an abbreviation to represent some common abstraction, we should give a clear definition of the abstraction rather than just using abbreviation.

**SuggestedRemedy**

Change "xGBASE-T" on line 13 thru 15 with "40GBASE-T/10GBASE-T/1000BASE-T".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 6  
See also comments 82, 95, 92, 102, 273, 309, 324



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 78 SC 78.1 P 57 L 3 # 325  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Changed text in 78.1 does not exist in P02.3bx draft D3.0.

## SuggestedRemedy

Remove line 3 through 9 in page 57 (i.e. change to text in 78.1).

Response Response Status C

ACCEPT.

CI 78 SC 78.1 P 57 L 48 # 486  
Brown, Matt APM

Comment Type ER Comment Status A EEE

Missing a comma. Also, "for" should not be delete without altering the rest of the sentence.

## SuggestedRemedy

Change:

Except for BASE-T<For> PHYs with an operating speed of 40 Gb/s or greater that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake.

To:

"Except for BASE-T PHYs, for PHYs with an operating speed of 40 Gb/s or greater that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake."

Or alternately #1:

For PHYs with an operating speed of 40 Gb/s or greater, with the exception of the 40GBASE-T PHY, that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake.

Or alternately #2:

For BASE-R PHYs with an operating speed of 40 Gb/s or greater that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake.

Response Response Status W

ACCEPT IN PRINCIPLE.

Resolved in comment 56.

CI 78 SC 78.1 P 57 L 8 # 456  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status A EZ

Missing space in "the10GBASE-T PHY".

## SuggestedRemedy

Change to "the 10GBASE-T PHY".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 41

CI 78 SC 78.1 P 57 L 8 # 41  
Hajduczenia, Marek Bright House Networks

Comment Type TR Comment Status A EZ

Text "For operation over twisted-pair cabling systems, EEE supportsmay be supported by the 100BASE-TX PHY, the 1000BASE-T PHY, the10GBASE-T PHY, and the 40GBASE-T PHY." does not exist in 802.3bx D3.0

## SuggestedRemedy

Where does this text come from? It is not part of P802.3bx text that is being balloted.

Response Response Status W

ACCEPT IN PRINCIPLE.

Text was removed during revision process.

Remove cited text to align with 802.3bx D3.0

CI 78 SC 78.1 P 57 L 9 # 233  
Booth, Brad Microsoft

Comment Type E Comment Status A EZ

Missing a space between "the" and "10GBASE-T"

## SuggestedRemedy

Add space.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 41

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 78 SC 78.1 P 57 L 9 # 104  
 McClellan, Brett Marvell  
 Comment Type E Comment Status A EZ  
 missing space after 'the'  
 SuggestedRemedy  
 add missing space after 'the'  
 Response Response Status C  
 ACCEPT IN PRINCIPLE. See comment 41

CI 78 SC 78.1.3.3.1 P 57 L 11 # 358  
 Remein, Duane Huawei Technologies  
 Comment Type E Comment Status A EZ  
 No need to include text that is not changing:  
 "Change text in clause 78.1.3.3.1 as follows:"  
 There are also three stray "<XREF>" marks in this section (ln 34, 51 & pg 58 ln 2).  
 SuggestedRemedy  
 Change to read:  
 "Change 7th paragraph in clause 78.1.3.3.1 as follows:"  
 Remove the first 6 paras: "When the start of "Assert LPI" encoding on the xMII is detected, ....  
 No data frames are lost or corrupted during the transition to or from the LPI mode."  
 Remove stray "<XREF>"s  
 Remove unchanged Figure 78-4 and WARNING following.  
 Response Response Status C  
 ACCEPT.

CI 78 SC 78.1.3.3.1 P 57 L 11 # 42  
 Hajduczenia, Marek Bright House Networks  
 Comment Type ER Comment Status A EZ  
 Text in 78.1.3.3.1 is modified only in line 48 - if there are no other changes, remove all  
 unmodified text and update editorial instructions accordingly.  
 SuggestedRemedy  
 Per comment  
 Response Response Status W  
 ACCEPT IN PRINCIPLE. See comment 358 for more complete remedy

CI 78 SC 78.1.3.3.1 P 57 L 33 # 74  
 Mark, Laubach Broadcom Corporation  
 Comment Type E Comment Status A EZ  
 "<XREF>" text present:  
 Page 57 Line 33  
 Page 57 Line 51  
 Page 58 Line 2  
 SuggestedRemedy  
 Resolve or remove.

Response Response Status C  
 ACCEPT. See comment 194

CI 78 SC 78.1.3.3.1 P 57 L 34 # 194  
 Anslow, Pete Ciena  
 Comment Type E Comment Status A EZ  
 The cross-reference to "Figure 78-3" is showing as "<XREF>Figure 78-3".  
 This is because the "FigNumber" cross-reference format used in Clause 78 is "<XREF>Figure\<\$paranumonly>" and this has been pasted into a clause file other than the original Clause 78  
 file which does not have an "XREF" character tag defined.  
 SuggestedRemedy  
 The easiest way to fix this is to highlight the cross-reference, open the Cross-reference pod,  
 Edit Format, delete the "XREF" from the start of the Definition, Done, Internal Cross-  
 References, Update.

Response Response Status C  
 ACCEPT. See comment 74

CI 78 SC 78.1.3.3.1 P 57 L 34 # 59  
 Marris, Arthur Cadence  
 Comment Type E Comment Status A EZ  
 Fix cross reference  
 SuggestedRemedy  
 Delete "<XREF>" and elsewhere in the document  
 Response Response Status C  
 ACCEPT IN PRINCIPLE. See comments 74, 194.  
 Editor to search pdf for remaining XREFS after implementing fix.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 78 SC 78.1.3.3.1 P 57 L 48 # 397  
 Remein, Duane Huawei Technologies

Comment Type T Comment Status A EEE

This wording seems excessively broad and may lead to problems in the future:  
 "Except for BASE-T PHYs with an operating speed of 40 Gb/s ..."

## SuggestedRemedy

Change to:  
 "Except for 40GBASE-T, PHYs with an operating speed of 40 Gb/s ..."  
 (don't forget to include the stricken "For")

Response Response Status C

ACCEPT IN PRINCIPLE. (see comment 56)

CI 78 SC 78.1.3.3.1 P 57 L 48 # 326  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A EEE

The distinction of optional or mandatory support for deep sleep and fast wake is very confusing and not clear.

For instance, for the first sentence, changing "For PHYs with an operating speed of 40 Gb/s or greater that implement the optional EEE capability" with "Except for BASE-T PHYs with an operating speed of 40 Gb/s or greater that implement EEE capability" may be wrong, because the qualifier is changed in a wrong way.

## SuggestedRemedy

Change the first sentence of the paragraph starting on line 48, page 57 as follows:

Except for BASE-T PHYs, PHYs with an operating speed of 40Gb/s or greater that implement the optional EEE capability may support two modes of LPI operation: deep sleep and fast wake.

Add two columns to Table 78-1 to indicate whether the deep sleep support and the fast wake support are mandatory or optional for each PHY or interface type.

Unfortunately, I am not familiar enough with EEE to give specific changes to Table 78-1, but I believe it helps to make it clear.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 56.

Since this is the only exception to the deep sleep rule, a table would be redundant and not add value to the existing content. Further, all EEE is optional so there are no mandatory capabilities, a table with optional and mandatory capabilities if an optional capability were implemented would likely add confusion.

CI 78 SC 78.1.3.3.1 P 57 L 48 # 56  
 McDermott, Thomas Fujitsu

Comment Type ER Comment Status A EEE

This wording is confusing, it is difficult to determine which modes are optional and required for the various different interface types and speeds.

## SuggestedRemedy

Recommended text: For Base-T PHYs with an operating speed of 10Gb/s or less that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake...

Then insert: For Base-T PHYs with an operating speed of 40Gb/s or greater that implement the optional EEE capability, LPI deep sleep is optional and fast wake is mandatory ... or whatever was intended.

Response Response Status W

ACCEPT IN PRINCIPLE.

No BASE-T PHYs currently support fast wake. Intent was 40GBASE-T is exempted from that requirement in 78.1.3.3.1

Change page 57, line 48: from:

"Except for BASE-T<For> PHYs with an operating speed of 40 Gb/s or greater that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake."

To:

"Except for BASE-T PHYs, for PHYs with an operating speed of 40 Gb/s or greater that implement the optional EEE capability, two modes of LPI operation may be supported: deep sleep and fast wake."

Insert "Except for BASE-T PHYs", on page 58, line 4 so it reads: "Except for BASE-T PHYs, fast wake support is mandatory for PHYs with an operating speed of 40Gb/s or greater that implement EEE."

See comments 486

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 78 SC 78.1.4 P 58 L 27 # 327  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Clause title is not correct.

## SuggestedRemedy

Change the clause title of 78.1.4 with "PHY types optionally supporting EEE".

Response Response Status C

ACCEPT.

CI 78 SC 78.1.4 P 58 L 30 # 328  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Caption and header row of Table 78-1 are incorrect and inconsistent.

## SuggestedRemedy

Change "each interface type" in Table 78-1 caption with "each PHY or interface type".

Change "PHY type" in header row of Table 78-1 with "PHY or interface type".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 195 for a more complete response.

CI 78 SC 78.1.4 P 58 L 34 # 43  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Text inserted into Table 78-1 seems to be a different font style than the remainder of the table.

## SuggestedRemedy

Apply proper font style to Table 78-1.

Same issue applies to Table 78-2 and in Table 78-5

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 195 for a more complete response

CI 78 SC 78.1.4 P 58 L 35 # 195  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The inserted rows in Tables 78-1, 78-2, and 78-5 should not be underlined as they are associated with "Insert" editing instructions.

The font used for these inserted rows is incorrect.

Also, the title of Table 78-2 is "Summary of the key EEE parameters for supported PHYs or interfaces" not "Clauses associated with each interface type"

## SuggestedRemedy

In Tables 78-1, 78-2, and 78-5 remove the underline from the inserted rows.

Re-apply the "CellBody" paragraph tag to the inserted rows (Times New Roman 9pt).

Correct the title of Table 78-2 to "Summary of the key EEE parameters for supported PHYs or interfaces"

Response Response Status C

ACCEPT. See comments 43, 271, 272, 328, 329

CI 78 SC 78.1.4 P 58 L 35 # 271  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Per IEEE P802.3/D3.0, the title of Table 78-1 is "Clauses associated with each PHY or interface type" and the heading of the first column is "PHY or interface type". The font of the inserted body row should be changed to match to table it will be added to.

## SuggestedRemedy

Update the table per the comment.

Response Response Status C

ACCEPT. See comment 195 for a more complete response

CI 78 SC 78.2 P 58 L 44 # 272  
Healey, Adam Avago Technologies

Comment Type E Comment Status A EZ

Per IEEE P802.3/D3.0, the title of Table 78-2 is "Summary of the key EEE parameters for supported PHYs or interfaces" and the heading of the first column is "PHY or interface type". The font of the inserted body rows should be changed to match to table it will be added to.

## SuggestedRemedy

Update the table per the comment.

Response Response Status C

ACCEPT. See comment 195 for a more complete response

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 78 SC 78.2 P 58 L 44 # 329  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Caption and header row of Table 78-2 are incorrect.

*SuggestedRemedy*

Change caption of Table 78-2 with "Summary of the key EEE parameters for supported PHYs or interfaces".

Change "Protocol" in header row with "PHY or interface type".

Response Response Status C

ACCEPT. See comment 195 for a more complete response

Cl 78 SC 78.5 P 59 L 10 # 40  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Stray ":"

*SuggestedRemedy*

Remove stray ":"

Response Response Status C

ACCEPT.

Cl 78 SC 78.5 P 59 L 3 # 44  
Hajduczenia, Marek Bright House Networks

Comment Type T Comment Status R Format

"10GBASE-T PHY and 40GBASE-T PHY" - in other locations, we used "10G/40GBASE-T PHYs"

*SuggestedRemedy*

Change "10GBASE-T PHY and 40GBASE-T PHY" to "10G/40GBASE-T PHYs" and then modify verbs to match accordingly.

Response Response Status C

REJECT. See comment 17

Cl 80 SC 80.1 P 61 L 11 # 61  
Marris, Arthur Cadence

Comment Type ER Comment Status A EZ

No editing instruction for Figure 80.1

*SuggestedRemedy*

Insert editing instruction  
"Replace Figure 80-1 with the following:"

Response Response Status W

ACCEPT. Dup of comment 381

Cl 80 SC 80.1 P 61 L 20 # 234  
Booth, Brad Microsoft

Comment Type T Comment Status A Format

Figure 80-1 should be cleaned up to improve readability. Plus, a few corrections are required.

*SuggestedRemedy*

Remove note 2 from the AN in the 40GBASE-T PHY (AN is mandatory). Remove the brackets on the right side of both the 40GBASE-R and 40GBASE-T stack, and create separation between bracket and 100GBASE-R stack to help indicate that PHY applies to all the sublayers between the xMII and the MDI. Remove the XLGMII label and arrow from the 40GBASE-R, and add arrow from XLGMII label for 40GBASE-T to point to the 40GBASE-R.

Make similar fixes to Figure 81-1.

Response Response Status C

ACCEPT.

Cl 80 SC 80.1.3 P 61 L 10 # 436  
Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Missing editing instruction

*SuggestedRemedy*

Insert editing instruction prior to Figure 80-1:  
Change Figure 80-1 as follows:

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 381

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 80 SC 80.1.3 P 61 L 11 # 381  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

No indication that Figure 80-1 is new.

*SuggestedRemedy*

Add editing instruction before figure: "Replace Figure 80-1 with the following."

Response Response Status W

ACCEPT. Dup of comment 61

CI 80 SC 80.1.3 P 61 L 24 # 197  
Anslow, Pete Ciena

Comment Type T Comment Status A EZ

There is no editing instruction associated with Figure 80-1.  
The curly brackets associated with the left hand two stacks have no labels.  
The AN block in the 40GBASE-T stack has note 2 applied: "NOTE 2—CONDITIONAL BASED ON PHY TYPE", but there is only one PHY type and the AN layer is not shown as optional in Table 80-2 or Figure 113-1.

*SuggestedRemedy*

Add an editing instruction: "Replace Figure 80-1 as follows:"  
Remove the curly brackets associated with the left hand two stacks in Figure 80-1.  
Remove note 2 from the AN block in the middle stack in Figure 80-1

Response Response Status C

ACCEPT IN PRINCIPLE. See comments 234, 381

CI 80 SC 80.1.3 P 61 L 37 # 332  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status A PCS

A new abbreviation for "RS-LDPC" is not defined.

*SuggestedRemedy*

Add a definition of "RS-LDPC" as follows"

RS-LDPC = REED-SOLOMON LOW-DENSITY PARITY CHECK

Response Response Status C

ACCEPT IN PRINCIPLE.

Use existing 802.3 defined abbreviations, RS-FEC and LDPC, as follows:

Change RS-LDPC PCS in Figures 80-1 and 81-1 to "40GBASE-T PCS"

In 113.3.2.2 (p. 80, line 44) change "mixed 513B-65B-RS-LDPC encoding" to "mixed 513B-65B-RS-FEC-LDPC encoding"

In Figure 113-7 (p. 93) change "RS-LDPC received frame" to "Received frame" and change "RS-LDPC decoded frame" to "FEC-decoded frame" (since LDPC and RS-FEC are already called out in the figure)

Insert in 80.1.4 after line 49, "40GBASE-T uses a combination of Reed-Solomon-FEC (RS-FEC) and low density parity check (LDPC) FECs in its physical coding sublayer that is mapped to a 128 double-square (DSQ128) constellation for transmission on 4-pair, twisted-pair copper cabling."

See comments 200 and 439

CI 80 SC 80.1.3 P 61 L 6 # 45  
Hajduczenia, Marek Bright House Networks

Comment Type ER Comment Status A EZ

No editorial instructions for changes to Figure 80-1—Architectural positioning of 40 Gigabit and 100 Gigabit Ethernet

*SuggestedRemedy*

Insert editorial instruction above Figure 80-1 as follows "Replace Figure 80-1 with the figure shown below"

Response Response Status W

ACCEPT IN PRINCIPLE.

See comments 61, 381

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

Cl 80 SC 80.1.3 P 61 L 7 # 330  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Title of clause is not correct.

## SuggestedRemedy

Change the title of 80.1.3 with "Relationship of 40 Gigabit and 100 Gigabit Ethernet to the ISO OSI reference model".

Response Response Status C

ACCEPT.

Cl 80 SC 80.1.3 P 61 L 9 # 331  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

A period is missing.

## SuggestedRemedy

Add a period "." at the end of line 9.

Response Response Status C

ACCEPT.

Cl 80 SC 80.1.3 P 61 L 9 # 196  
Anslow, Pete Ciena

Comment Type T Comment Status A EZ

The point of the list in 80.1.3 is to define the locations where the data-path widths are cannot be changed by the implementation. Each element in the existing list states what the width at that location is.

Also, as this is associated with an Insert editing instruction it should not be underlined.

## SuggestedRemedy

Change to: "k) The MDI as specified in Clause 113 for 40GBASE-T uses a 4 lane data path."

Remove the underline

Response Response Status C

ACCEPT.

Cl 80 SC 80.1.4 P 61 L 47 # 198  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Text associated with an Insert editing instruction should not be underlined. (strictly, this would result in underlined text being inserted into the standard.)

## SuggestedRemedy

Remove the underline from the inserted text in 80.1.4

Response Response Status C

ACCEPT.

Cl 80 SC 80.1.4 P 61 L 49 # 333  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Phrase "for transmitting 40GBASE-T over" is odd and inconsistent with other paragraphs in the same clause.

## SuggestedRemedy

Change "for transmitting 40GBASE-T over" with "for 40Gb/s operation over".

Response Response Status C

ACCEPT.

Cl 80 SC 80.1.4 P 61 L 49 # 235  
Booth, Brad Microsoft

Comment Type E Comment Status A EZ

Twisted-pair should be hyphenated.

## SuggestedRemedy

Add hyphen. Check draft for other occurrences.

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 80 SC 80.1.4 P 62 L 1 # 199  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The Green font to denote an external cross-reference is not appropriate for an editing instruction since, by definition, the thing it refers to is in the draft!

## SuggestedRemedy

Use the normal font for "Table 80-1" on line 1, "Table 80-2" on line 16 and also for "Table 80-2" on line 50.

Response Response Status C

ACCEPT.

CI 80 SC 80.1.4 P 62 L 1 # 334  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

40GBASE-ER4 is added to Table 80-1 in P802.3bx.

## SuggestedRemedy

Change "between 40GBASE-LR4 and 100GBASE-KR4" with "between 40GBASE-ER4 and 100GBASE-KR4".

Response Response Status C

ACCEPT.

CI 80 SC 80.1.4 P 62 L 10 # 487  
 Brown, Matt APM

Comment Type E Comment Status A EZ

Missing Clause reference.  
 Missing "over" between "transmission" and "balanced".  
 To be consistent with the other descriptions in this table "for transmission" should be "over".

## SuggestedRemedy

Change:  
 40 Gb/s PHY using RS-FEC/LDPC encoding for transmission balanced twisted-pair structured cabling systems  
 To:  
 40 Gb/s PHY using RS-FEC/LDPC encoding over balanced twisted-pair structured cabling systems (see Clause 113)

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 200

CI 80 SC 80.1.4 P 62 L 10 # 200  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Word missing in "using RS-FEC/LDPC encoding for transmission balanced twisted-pair"

## SuggestedRemedy

Change to "using RS-FEC/LDPC encoding for transmission over balanced twisted-pair"

Response Response Status C

ACCEPT IN PRINCIPLE.

Change

"40 Gb/s PHY using RS-FEC/LDPC encoding for transmission balanced twisted-pair structured cabling systems" to

"40 Gb/s PHY using RS-FEC and LDPC encoding over balanced twisted-pair structured cabling systems (see Clause 113)"

(see comment 487)

CI 80 SC 80.1.5 P 62 L 16 # 73  
 Mark, Laubach Broadcom Corporation

Comment Type ER Comment Status A EZ

Update editing directive for better clarity, as multiple rows are being inserted as well as the single right most column.

## SuggestedRemedy

Change: "Insert the following row after 40GBASE-LR4 and rightmost end column to Table 80-2 (existing PHY entries in new column are blank)"  
 to: "Change: "Insert the following rows after 40GBASE-LR4 and rightmost single end column to Table 80-2 (existing PHY entries in new column are blank)""

Response Response Status W

ACCEPT IN PRINCIPLE.

See comment 201

CI 80 SC 80.1.5 P 62 L 16 # 335  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

40GBASE-ER4 is added in P802.3bx.

## SuggestedRemedy

Change "after 40GBASE-LR4" on line 16 with "after 40GBASE-ER4".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 201



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 80 SC 80.1.5 P 62 L 16 # 488  
Brown, Matt APM

Comment Type E Comment Status A EZ

Incorrect and incomplete editing instruction. Since you are showing the whole table with changes a change instruction rather than insert instruction is required. Also, the reference point for the new row is incorrect.

**SuggestedRemedy**

Change:  
Insert the following row after 40GBASE-LR4 and rightmost end column to Table 80-2 (existing PHY entries in new column are blank)  
To:  
Change Table 80-2, inserting a new row for 40GBASE-T and a new column for 40GBASE-T PCS/PMA/PMD, as follows:

Underline all items in the new row and new column.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 201

CI 80 SC 80.1.5 P 62 L 16 # 382  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

This Editing Instruction is unclear at best and possible misleading:  
"Insert the following row after 40GBASE-LR4 and rightmost end column to Table 80-2 (existing PHY entries in new column are blank)"  
Note that the "row after 40GBASE-LR4" is 40GBASE-ER4 NOT 40GBASE-T!

**SuggestedRemedy**

Change to read:  
"Insert a bottom row and rightmost end column to Table 80-2 (existing PHY entries in new column are blank)"  
Remove unchanged rows in table OR use Mark-up text in table.

Response Response Status W

ACCEPT IN PRINCIPLE.  
See comment 201

CI 80 SC 80.1.5 P 62 L 16 # 201  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

As the changes to Table 80-2 have not been marked, a "Replace" editing instruction is more appropriate than an Insert.  
The "113" clause number in the rightmost heading should be a cross-reference  
The ruling between the headings for the 40GBASE-FR PMD and 40GBASE-T PCS/PMA/PMD columns is the wrong thickness

**SuggestedRemedy**

Change the editing instruction to "Replace Table 80-2 as follows:"  
Make the "113" clause number in the rightmost heading a cross-reference  
Make the ruling between the headings for the 40GBASE-FR PMD and 40GBASE-T PCS/PMA/PMD columns "Very thin"

Response Response Status C

ACCEPT.  
See comments 335, 488, 382, 73, 336, 46, 359  
And remove "/PMD" from 40GBASE-T entry if comment 347 is accepted

CI 80 SC 80.1.5 P 62 L 25 # 336  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Vertical border line in the header row of Table 80-2 between columns 89 and 113 is thick.

**SuggestedRemedy**

Use thin line for the vertical border line in the header row of Table 80-2 between columns 89 and 113.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 201

CI 80 SC 80.1.5 P 62 L 46 # 46  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status R EZ

Row with 40GBASE-T in Table 80-2 should be marked with underline.

**SuggestedRemedy**

Per comment  
The same observation applies to Table 80-5, Table 80-1

Response Response Status C

REJECT.  
Table 80-2 is now replaced, so no underline.  
See comment 134 for use of underline, only "change" uses that. Table 80-1 is an insert instruction, as is Table 80-5.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Gr

CI 80 SC 80.1.5 P 62 L 50 # 359  
 Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

Excessive use of forest green text "Table 80-2"

## SuggestedRemedy

change color to black

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 202 for a more complete remedy  
 Apologies from a red-green colorblind editor.

CI 80 SC 80.1.5 P 62 L 52 # 202  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The note is not formatted correctly.

## SuggestedRemedy

Change "Note: " to "NOTE—" where "—" is an em dash (Ctrl-q Shft-q).  
 Apply the paragraph Tag "Note" (9 pt font).  
 Make "Clause 28" a cross-reference

Response Response Status C

ACCEPT.

CI 80 SC 80.4 P 63 L 16 # 203  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The footnotes are not formatted as table footnotes.  
 In footnote b 1.4.110 should be 1.4.117  
 Footnote c is missing

## SuggestedRemedy

Format the footnotes at table footnotes  
 In footnote b change "1.4.110" to "1.4.117"  
 add footnote c

Response Response Status C

ACCEPT.

CI 80 SC 80.4 P 63 L 17 # 337  
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Reference to 1.4.110 is updated in P802.3bx.

## SuggestedRemedy

Change reference to "1.4.110" on line 17 with "1.4.117".

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 203 for a more complete remedy

CI 81 SC 81.1 P 65 L 10 # 62  
 Marris, Arthur Cadence

Comment Type ER Comment Status A EZ

Incorrect editing instruction

## SuggestedRemedy

Change  
 Change Figure 81-1 as follows:  
 To  
 Replace Figure 81-1 as follows:

Also fix key at bottom of Figure 81.1

Response Response Status W

ACCEPT.

CI 81 SC 81.1 P 65 L 10 # 346  
 Lusted, Kent Intel

Comment Type ER Comment Status A EZ

It isn't clear from the editing instructions on line 7 as to what is changing in the figure.

The figure does not contain any underlined text, strikeouts, etc.

Furthermore, when compared to Figure 81-1 in P802.3bx Draft 3.0, much of the text between the figure and the figure title is missing (i.e. NOTE 1, XLGMII, etc)

## SuggestedRemedy

Clarify editing instructions and add align missing text with Figure 81-1 from P802.3bx D3.0.

Response Response Status W

ACCEPT IN PRINCIPLE. See comment 62

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 81 SC 81.1 P 65 L 33 # 338  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A PCS

Definition of RS-LDPC is missing.

## SuggestedRemedy

Add definition of RS-LDPC as follows:

RS-LDPC = REED-SOLOMON LOW-DENSITY PARITY CHECK

Response Response Status C

ACCEPT IN PRINCIPLE.

See comment 332, removing RS-LDPC as an abbreviation from the text and using existing RS-FEC and LDPC abbreviations.

CI 81 SC 81.1 P 65 L 33 # 489  
Brown, Matt APM

Comment Type ER Comment Status A EZ

Figure 81-1, many notes are not visible as it appears line line spacing was change to 3x instead of 1x.

Also spacing between stacks is not equal.

## SuggestedRemedy

Fix note spacing.

Fix spacing between each of the PHY stacks such that they appear equal.

Response Response Status W

ACCEPT.

LATE COMMENT - TASK FORCE TO VOTE ON CONSIDERING

CI 81 SC 81.1 P 65 L 6 # 47  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction is unclear "Change Figure 81-1 as follows:" - there are no changes marked in Figure 81-1.

## SuggestedRemedy

Change editorial note from "Change Figure 81-1 as follows:" to "Replace Figure 81-1 with figure shown below" or explicitly show changes (in red) in Figure 81-1 and then leave the editorial note alone.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 204

CI 81 SC 81.1 P 65 L 7 # 360  
Remein, Duane Huawei Technologies

Comment Type E Comment Status A EZ

I believe this is a replacement not a change (no changes indicated in figure):  
"Change Figure 81-1 as follows:"

## SuggestedRemedy

Change Editing Instruction to: "Replace Figure 81-1 with the following:"

Response Response Status C

ACCEPT. See comment 204 for a more complete remedy

CI 81 SC 81.1 P 65 L 7 # 204  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

A "Change" editing instruction isn't appropriate here.

The AN block in the 40GBASE-T stack has note 2 applied. If it was visible, this would be: "NOTE 2—CONDITIONAL BASED ON PHY TYPE", but there is only one PHY type and the AN layer is not shown as optional in Table 80-2 or Figure 113-1.

The acronym expansions and notes in the figure have an inappropriate format.

The spacing of the three stacks id uneven.

## SuggestedRemedy

Change the editing instruction to: "Replace Figure 81-1 as follows:"

Remove note 2 from the AN block in the middle stack in Figure 81-1

Fix format of the acronym expansions and notes in the figure.

Change the position of the three stacks to be even and centred on the blocks above.

Response Response Status C

ACCEPT.

CI 81 SC 81.1.7.3 P 65 L 46 # 48  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial note is incorrect: "Change 81.1.7.3 for carrier indication definition:"

## SuggestedRemedy

Change "Change 81.1.7.3 for carrier indication definition:" to "Change 81.1.7.3 as follows"

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 81 SC 81.1.7.3 P 65 L 48 # 58  
McDermott, Thomas Fujitsu

Comment Type E Comment Status A EZ

Double negative text is confusing.

## SuggestedRemedy

Recommend revising to :

40 Gb/s and 100 Gb/s operation supports full duplex operation only. The RS never generates this primitive for PHYs unless they support either EEE or Link Interruption. ...

Response Response Status C

ACCEPT.

CI 81 SC 81.1.7.3 P 65 L 49 # 63  
Marris, Arthur Cadence

Comment Type T Comment Status A EZ

Text should be reworded for clarity and there is an extra full stop.

## SuggestedRemedy

Change  
"The RS never generates this primitive for PHYs that do not support either EEE or Link Interruption.."  
To  
"The RS never generates this primitive for PHYs that support neither EEE nor Link Interruption."

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 58

CI 81 SC 81.1.7.3 P 65 L 49 # 223  
Booth, Brad Microsoft

Comment Type E Comment Status A EZ

Double period at end of paragraph.

## SuggestedRemedy

Fix.

Response Response Status C

ACCEPT.

CI 81 SC 81.1.7.3 P 65 L 52 # 339  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

Reference to Figure 81-10a is not correct.

## SuggestedRemedy

Change reference to "Figure 81-10a" on line 52 with "Figure 81-13".

Response Response Status C

ACCEPT. See comment 205 for a more complete remedy

CI 81 SC 81.1.7.3 P 65 L 52 # 205  
Anslow, Pete Ciena

Comment Type E Comment Status A EZ

"in Figure 81-10a" should be "in Figure 81-13" and it should be in green font.

## SuggestedRemedy

Change "in Figure 81-10a" to "in Figure 81-13" and apply the character tag "External"

Response Response Status C

ACCEPT.

CI 81 SC 81.3.4 P 66 L 6 # 49  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction imprecise: "Change 81.3.4 add Link Interruption Sequence ordered\_set definition:"

## SuggestedRemedy

Change "Change 81.3.4 add Link Interruption Sequence ordered\_set definition:" to "Insert a new paragraph after paragraph number 4 in 81.3.4, as shown below."

Insert a new editorial instruction above Table 81-5 as follows: "Change Table 81-5 by adding a new row for Link Interruption, as shown below."

Remove teh rest of text from 81.3.4.

Response Response Status C

ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 81 SC 81.3.4.1 P 67 L 1 # 50  
Hajduczenia, Marek Bright House Networks

Comment Type T Comment Status A EZ

In 81.3.4.1, only fault\_sequence, last\_seq\_type, link\_fault, and seq\_type are modified - the rest stays the same.

## SuggestedRemedy

Change editorial instruction from "Change 81.3.4.1 to include Link Interruption in fault\_sequence, last\_seq\_type, link\_fault, and seq\_type variables" to "Change definitions of variables: fault\_sequence, last\_seq\_type, link\_fault, and seq\_type in 81.3.4.1 as shown below."  
Remove all variables apart from fault\_sequence, last\_seq\_type, link\_fault, and seq\_type

Response Response Status C  
ACCEPT.

CI 81 SC 81.3.4.2 P 67 L 46 # 75  
Mark, Laubach Broadcom Corporation

Comment Type E Comment Status A EZ

I went and pulled out the latest 802.3bx Section 6 draft to review if Figure 81-11 has any changes. I didn't see any. If that is the case, perhaps updating the editing directive to focus on paragraph text only?

## SuggestedRemedy

As per comment.

Response Response Status C  
ACCEPT IN PRINCIPLE.  
Editing instruction to focus on text per comment.  
See comment 51 for a more complete remedy

CI 81 SC 81.3.4.2 P 67 L 48 # 51  
Hajduczenia, Marek Bright House Networks

Comment Type T Comment Status A EZ

Text on page 67 ,lines 49-53 has not been modified and should not be shown.

## SuggestedRemedy

Remove text n page 67, lines 49-53  
Show changes in Figure 81-11 in red.

Response Response Status C  
ACCEPT.

CI 81 SC 81.3.4.2 P 68 L 36 # 52  
Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Editorial instruction is missing for text pn page 68

## SuggestedRemedy

Insert the following editorial instruction on page 68, line 35: "Change second and third paragraph in 81.3.4.2, as shown below."

Response Response Status C  
ACCEPT.

CI 81 SC 81.3.4.2 P 68 L 46 # 383  
Remein, Duane Huawei Technologies

Comment Type ER Comment Status A EZ

The combination of Editing Instruction and included figure are confusing.  
"Change 81.3.4.2 State Diagram to include Link Interruption under conditions for variable link\_fault"  
Is the figure changed or not? It doesn't look like it.

## SuggestedRemedy

Change Editing Instruction to read:  
"Change the text of 81.3.4.2 to include Link Interruption under conditions for variable link\_fault as shown."

Remove is unchanged Figure 81-11

Response Response Status W  
ACCEPT.

CI 81 SC 81.5.3.7 P 69 L 5 # 340  
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status A EZ

The clause numbers on line 5 are not correct.

## SuggestedRemedy

Change the description on line 5 as follows:

Insert the new subclause 81.5.3.7 for Link Interruption after 81.5.3.6

Response Response Status C  
ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 81.5 SC 81.5.3.7 P 69 L 12 # 206  
 Anslow, Pete Ciena

Comment Type T Comment Status A EZ

81.3.1.2 TXC<7:0> (transmit control) does not define detection of Link Interruption.  
 The entries in the Subclause column for both rows and "Table 81-5" should be a cross-reference (not green).  
 The item numbering does not follow the numbering practice for the rest of this PICS.

## SuggestedRemedy

Change "81.3.1.2" to "81.3.4".  
 Make the entries in the Subclause column for both rows and "Table 81-5" cross-references.  
 Change item "LINT" to "LINT1"  
 Change item "LINT1" to "LINT2"

Response Response Status C  
 ACCEPT.

CI 99 SC P 1 L 10 # 207  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The " X" was removed from "Amendment X:" in the 802.3 template in February 2014

## SuggestedRemedy

Change "Amendment X:" to "Amendment:" on page 1, line 10 and also on page 19, line 3

Response Response Status C  
 ACCEPT.

CI 99 SC P 1 L 29 # 208  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

"[review/balloting stage]" should be replaced with the stage that the draft is at.

## SuggestedRemedy

Change "[review/balloting stage]" to "Working Group ballot recirculation"

Response Response Status C  
 ACCEPT. Dup of comments 405, 252, 474

CI 99 SC P 19 L 46 # 212  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

The editor's note refers to "IEEE P802.3bj and IEEE P802.3bk" which will both be superseded amendments by the time P802.3bq is published.

## SuggestedRemedy

Change:  
 "(e.g., IEEE P802.3bj and IEEE P802.3bk)" to:  
 "(e.g., IEEE P802.3bn and IEEE P802.3bw)"

Response Response Status C  
 ACCEPT.

CI 99 SC P 3 L 13 # 209  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

In the second editor's note, "Amendment title (SHALL match PAR)" should be replaced by the exact wording of the amendment title from the PAR.

## SuggestedRemedy

In the second editor's note, replace "Amendment title (SHALL match PAR)" with the exact wording of the amendment title from the PAR.

Response Response Status C  
 ACCEPT.

CI 99 SC P 4 L 24 # 210  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

There is a spurious "IEEE 802.3 will continue to evolve." on line 24  
 Also, the summary of other amendments that are likely to be published before 802.3bq (at least IEEE Std 802.3bw-201x) should be added here

## SuggestedRemedy

Remove "IEEE 802.3 will continue to evolve." on line 24  
 Add the summary of other amendments that are likely to be published before 802.3bq (at least IEEE Std 802.3bw-201x).

Response Response Status C  
 ACCEPT.

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 99 SC P 6 L 13 # 211  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Change:

FirstName SecondName, IEEE P802.3xx Task Force name Task Force Chair

FirstName SecondName, IEEE P802.3xx Task Force name Task Force Editor-in-Chief  
 to the text appropriate for this project

SuggestedRemedy

Change:

FirstName SecondName, IEEE P802.3xx Task Force name Task Force Chair

FirstName SecondName, IEEE P802.3xx Task Force name Task Force Editor-in-Chief  
 to the text appropriate for this project

Response Response Status C

ACCEPT. Dup of comments 53, 227, 406

CI 99 SC 0 P 1 L 29 # 474  
 Thompson, Geoff GraCaSI S.A.

Comment Type E Comment Status A EZ

The text "[review/balloting stage]" is intended to be edited for each draft to actually indicate what the use is of this particular draft.

SuggestedRemedy

"[review/balloting stage]" to read: "Working Group 1st recirculation." for the next draft.

Response Response Status C

ACCEPT. Dup of comments 405, 252, 208

CI 99 SC 0 P 18 L 28 # 451  
 Frazier, Howard Broadcom Corporation

Comment Type E Comment Status A EZ

Missing space between subclause number and subclause heading in table of contents at line 28 and below on this page.

SuggestedRemedy

Insert space.

Response Response Status C

ACCEPT IN PRINCIPLE. See comment 255

CI 99 SC 0 P 3 L 1 # 449  
 Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A EZ

I believe that we agreed that this would be an amendment to IEEE Std 802.3-201x.

SuggestedRemedy

Change year of base standard in the header to be 201x.

Response

Response Status W

ACCEPT.

CI 99 SC 0 P 3 L 13 # 450  
 Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status A EZ

Missing title of amendment.

SuggestedRemedy

Provide complete title of amendment in the boxed text "This introduction is not part of..."

Response

Response Status W

ACCEPT.

CI 99 SC 1 P 1 L 29 # 405  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

front matter is missing balloting stage text

SuggestedRemedy

Replace "[review/balloting stage]" by "Working Group ballot"

Response

Response Status C

ACCEPT. Dup of comments 252, 474, 208

## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI 99 SC 1 P 6 L 13 # 406  
 Zimmerman, George CME Consulting

Comment Type E Comment Status A EZ

Missing task force chair and task force editor in chief and designation of task force

## SuggestedRemedy

Replace "FirstName SecondName IEEE P802.3xx" with:  
 "David Chalupsky IEEE P802.3bq" as Task Force Chair  
 "George Zimmerman IEEE P802.3bq" as Task Force Editor-in-Chief

Response Response Status C

ACCEPT. Dup of comments 53, 211, 227

CI 99 SC 99 P 6 L 1 # 467  
 Law, David HP

Comment Type E Comment Status A EZ

Please include the working group balloter list supplied in the file  
 <IEEE\_P802d3bq\_WG\_names.pdf>.

## SuggestedRemedy

See comment.

Response Response Status C

ACCEPT.

CI 99 SC 99 P 6 L 14 # 53  
 Hajduczenia, Marek Bright House Networks

Comment Type E Comment Status A EZ

Name of Chair and Chief Editor for the project are known I assume?

## SuggestedRemedy

Fill in the names for the Chair and Chief Editor for the project

Response Response Status C

ACCEPT. Dup of comments 211, 227, 406

CI 99 SC Table of Contents P 11 L 27 # 236  
 Brown, Thomas Vitesse Semiconductor

Comment Type E Comment Status A EZ

Under Annex 28c in TOC, a phrase is listed 1000 xGBASE-T

The phrase 1000 xGBASE-T is not correct.

## SuggestedRemedy

I believe the author should replace 1000 xGBASE-T with 1000BASE-T

Response Response Status C

ACCEPT IN PRINCIPLE.

Edit to title of 28.C.11 removed 10GBASE-T and 1000, and inserted xG to make this the  
 xGBASE-T code - Editor to review table of contents generation to fix.

CI A SC A P 21 L 1 # 213  
 Anslow, Pete Ciena

Comment Type E Comment Status A EZ

Either include some bibliography entries to be added to Annex A or remove it from the draft

## SuggestedRemedy

Either include some bibliography entries to be added to Annex A and remove the editor's note  
 and "[Bx1] Name—Title."  
 or remove Annex A from the draft entirely

Response Response Status C

ACCEPT IN PRINCIPLE. Dup of comments 232, 256, 54, 373.  
 See comment 256

CI A SC A P 21 L 1 # 232  
 Booth, Brad Microsoft

Comment Type E Comment Status A EZ

No bibliography

## SuggestedRemedy

Remove Annex A

Response Response Status C

ACCEPT IN PRINCIPLE. Dup of comments 54, 256, 213, 373.  
 See comment 256



## Physical Layer and Management Parameters for 40Gb/s Operation, Type 40GBASE-T Initial Working Group

CI **A** SC **A** P **21** L **1** # **54**  
Hajduczenia, Marek Bright House Networks

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

There is no reason to have Annex A if there are not entries

## SuggestedRemedy

Remove Annex A - there is no content.

Response Response Status **C**

ACCEPT IN PRINCIPLE. Dup of comments 232, 256, 213, 373.  
See comment 256

CI **A** SC **n/a** P **21** L **1** # **373**  
Remein, Duane Huawei Technologies

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

Annex A should not be included if there are no changes to it.

## SuggestedRemedy

Remove Annex A

Response Response Status **W**

ACCEPT IN PRINCIPLE. Dup of comments 232, 256, 213, 54.  
See comment 256

CI **Annex** SC P **21** L **1** # **256**  
Grow, Robert RMG Consulting

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

Looks like the FrameMaker book is messed up.

## SuggestedRemedy

Delete Annex A at this point from the FrameMaker book.

Response Response Status **C**

ACCEPT IN PRINCIPLE. (Dup of comments 232, 54, 213, 373.)  
Add Editor's note (to be removed prior to publication): This clause is a placeholder for  
bibiliographic entries, and is to be deleted if none are added by the end of the WG ballot phase.

CI **Annex** SC P **25** L **1** # **260**  
Grow, Robert RMG Consulting

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

There does not appear to be any modifications to this Annex.

## SuggestedRemedy

Remove Annex 28A from the FrameMaker book.

Response Response Status **C**

ACCEPT. (dup of comments 5, 138, 375, 248, 263)

CI **Annex** SC P **26** L **8** # **261**  
Grow, Robert RMG Consulting

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

This should be an insert instruction.

## SuggestedRemedy

Insert new list item a) and re-letter following list items.

Response Response Status **C**

ACCEPT.

CI **Annex** SC **28D.8** P **28** L **10** # **262**  
Grow, Robert RMG Consulting

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

FrameMaker definition seems to be messed up, no space after number.

## SuggestedRemedy

Fix FrameMaker definition.

Response Response Status **C**

ACCEPT. See comment 69

CI **Annex** SC **28D.8** P **28** L **10** # **112**  
Cibula, Peter Intel Corporation

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

Punctuation - The title of the subclause is missing a space.

## SuggestedRemedy

Change "28D.8Extensions required for Clause 113(40GBASE-T)" to "28D.8 Extensions  
required for Clause 113(40GBASE-T)", inserting a space between "28D.8" and "Extensions"

Response Response Status **C**

ACCEPT.