

IEEE P802.3bz D3.1 2.5G/5GBASE-T 1st Sponsor recirculation ballot comments

Cl 30 SC 30.3.2.1.3 P 31 L 27 # r01-1  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 "...following new entry..." should be "...following new entries..."  
 SuggestedRemedy  
 Change "...following new entry..." to "...following new entries..."  
 Response Response Status C  
 ACCEPT.

Cl 30 SC 30.3.2.1.2 P 31 L 16 # r01-2  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 The draft contains several editor's notes saying that the editing instruction needs to be updated once the "publication order of the various amendments becomes settled". This order is now settled.  
 SuggestedRemedy  
 Update the editing instructions accordingly and remove the Editor's notes.  
 Response Response Status C  
 ACCEPT.

Cl 30 SC 30.6.1.1.5 P 33 L 21 # r01-3  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 Rather than leaving the insertion position uncertain, make it explicit so that subsequent amendments know what the resulting order is. Also, there has been an agreement with IEEE staff that "For insert, the only other amendments included in the editing instruction are those that affect the insert point."  
 SuggestedRemedy  
 Change the editing instruction to: "Insert the following new entries in "APPROPRIATE SYNTAX" after 1000BASE-T1 (inserted by IEEE Std 802.3bp-201x):"  
 Response Response Status C  
 ACCEPT.

Cl 45 SC 45.2.1.1.3 P 36 L 27 # r01-4  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 In the first sentence of the last paragraph of 45.2.1.1.3, the existing description is in order of increasing binary numbers: 0010, then 0011, then 0100. However, the added description is in the opposite order.

SuggestedRemedy  
 Change:  
 "when set to 0111 the use of a 5G PMA/PMD is selected; when set to 0110 the use of a 2.5G PMA/PMD is selected" to:  
 "when set to 0110 the use of a 2.5G PMA/PMD is selected; when set to 0111 the use of a 5G PMA/PMD is selected"  
 Response Response Status C  
 ACCEPT.

Cl 45 SC 45.2.1.6 P 38 L 15 # r01-5  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 Comment i-83 stated:  
 "aRO = Read only, LH = Latching high" - Table 45-124 does not contain "LH" designator right now  
 This is not a correct statement. The rows of the table that have been reproduced in the P802.3bz draft do not contain LH, but a row that has not been included in the draft does. Comment i-83 should have been rejected. Footnote a in Table 45-124 is "RO = Read only, LH = Latching high" and should be shown as such. Choosing not to show the part of the table containing the "LH" is not a reason to change the footnote.

SuggestedRemedy  
 Reinstate the correct footnote in all tables that were changed due to comment i-83. This is at least:  
 Table 45-7 should be "R/W = Read/Write, RO = Read only"  
 Table 45-124 should be "RO = Read only, LH = Latching high"  
 Table 45-208 should be "RO = Read only, SC = Self-clearing, LH = Latching high"  
 Response Response Status C  
 ACCEPT.

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Cl 126 SC 126.3.2.2.6 P 95 L 35 # r01-6  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 The heading of Table 126-1 should have a table continuation variable at the end.  
 SuggestedRemedy  
 Place the cursor at the end of table title on first page. Then click on the Variables Tab and insert "Table Continuation" variable. This will add the (continued) on subsequent pages.  
 Response Response Status C  
 ACCEPT.

Cl 126 SC 126.3.2.2.18 P 99 L 23 # r01-7  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 IEEE uses an en-dash (Ctrl-q Shft-p) for a minus sign.  
 SuggestedRemedy  
 Replace all of the hyphens in Table 126-2 (and anywhere else that they are representing minus) with en-dashes.  
 Response Response Status C  
 ACCEPT.

Cl 31B SC 31B.3.7 P 195 L 39 # r01-8  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 the set of "max\_overrun" equations shown has been added to by the P802.3by draft.  
 SuggestedRemedy  
 change the editing instruction to include (as modified by IEEE Std 802.3by-201x) and add the 25G max\_overrun equation.  
 Response Response Status C  
 ACCEPT.

Cl 31B SC 31B.4.6 P 197 L 37 # r01-9  
 Anslow, Peter Ciena Corporation  
 Comment Type E Comment Status A Editorial  
 the PICS entries shown have been modified by the P802.3by draft.  
 SuggestedRemedy  
 Add (as modified by IEEE Std 802.3by-201x) to the editing instruction and show the changes made by the P802.3by draft.  
 Response Response Status C  
 ACCEPT.

Cl 126 SC 126.3.2.2.5 P 93 L 9 # r01-10  
 Yu, Ting-Fa  
 Comment Type E Comment Status A Editorial  
 This is for PCS Receive bit ordering. It should be rx\_coded instead of tx\_coded  
 SuggestedRemedy  
 change tx\_coded to rx\_coded  
 Response Response Status C  
 ACCEPT.

Cl 126 SC 126.3.2.2.16 P 98 L 41 # r01-11  
 Yu, Ting-Fa  
 Comment Type E Comment Status A Editorial  
 "LPDC" is typing error.  
 SuggestedRemedy  
 change "LPDC" to "LDPC"  
 Response Response Status C  
 ACCEPT.

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Cl 45 SC 45.5.3 P 57 L # r01-12  
Kim, Yongbum Broadcom Corporation

Comment Type G Comment Status A PICS

45.5.3 PICS PMA/PMD  
Shouldn't there be entry in PMA/PMD section that adds 2.5G and 5G?  
If Yes, then please consider accompanying proposed change

SuggestedRemedy

Item Feature Subclause Value/Comment Status Support  
2.5G Implementation of 2.5 Gb/s PMA/PMD 45.2.1.4 PMA:O Yes [ ]  
No [ ]  
5G Implementation of 5 Gb/s PMA/PMD 45.2.1.4 PMA:O Yes [ ]  
No [ ]

Response Response Status C

ACCEPT.

Cl 126 SC 126.5.4.4 P 156 L 36 # r01-13  
Sedarat, Hossein Aquantia

Comment Type T Comment Status A PMA

The PSD for injected white noise is specified to be at -127 dBm/Hz for 2.5G.  
This value is consistent with old ALSNR criterion. With the new ALSNR  
criterion, this value has to be updated to -125 dBm/Hz. See  
[http://www.ieee802.org/3/bz/public/mar16/Sedarat\\_3bz\\_01\\_0316.pdf](http://www.ieee802.org/3/bz/public/mar16/Sedarat_3bz_01_0316.pdf)  
for more details

SuggestedRemedy

Change -127 to -125.

Response Response Status C

ACCEPT.

Cl 46 SC 46.1 P 59 L 13 # r01-14  
Marris, Arthur Cadence Design Syst

Comment Type TR Comment Status R XGMII

For 2.5GBASE-T PHYs the link fault signaling state diagram described in 46.3.4 is only  
necessary to signal link interruption for fast retrain. Seeing as fast retrain is optional,  
implementation of the link fault signaling should be optional also.  
Making link fault signaling optional would allow speeded up SGMII implementations to be  
used to connect to 2.5GBASE-T PHYs allowing better inter-operability with existing ASIC  
implementations.

Also the requirement to implement the link fault state machine adds extra complexity to the  
ASIC attached to the 2.5GBASE-T PHY.

SuggestedRemedy

Add an extra sentence to the end of this paragraph so it reads:  
"The 2.5 Gb/s, 5 Gb/s, and 10 Gb/s Physical Coding Sublayers (PCS) are specified to the  
XGMII, so if not implemented, a conforming implementation shall behave functionally as if  
the RS and XGMII were implemented. For 2.5 Gb/s and 5 Gb/s data rates implementation  
of link fault signaling as described in 46.3.4 is optional."

Bring subclause 46.3.4 into 802.3bz and change the last sentence from:

"The RS shall implement the link fault signaling state diagram (see Figure 46-11)."

To:

"The RS shall implement the link fault signaling state diagram (see Figure 46-11) for data  
rates of 10 Gb/s and above. For 2.5 Gb/s and 5 Gb/s data rates implementation of the link  
fault signaling state diagram is optional."

Response Response Status W

REJECT.

Move to reject comment with the following resolution:

Making link fault signaling optional for 2.5 Gb/s would have consequences. These include  
fast retrain link interruptions and use of local fault for link recovery, but may include  
additional changes to operation, such as changes to Figures 126-14 and 126-16 PCS state  
machine operation, and changes would be required elsewhere in Clause 126.

Additional consequences may also fall out of these changes.

See McClellan\_3bz\_01\_0616.pdf, Lo\_3bz\_01\_0616.pdf and marris\_3bz\_1\_0616.pdf for  
discussion.

M: George Zimmerman

S: Jon Lewis

Y: 9

N: 0

A: 0

(room count 9 + Chair)

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Straw poll - I oppose the resolution in marris\_3bz\_01\_0616.pdf on slide 5.

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Y: 9  
N: 0  
A: 1  
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Cl 126 SC 126.3.6.2.2 P 110 L 20 # r01-15  
Zimmerman, George Aquantia, and CommS  
Comment Type E Comment Status A Editorial  
ldpc\_frame\_done definition is unused and not needed now that there is  
ldpc\_two\_frame\_done  
SuggestedRemedy  
Delete definition of ldpc\_frame\_done.  
Response Response Status C  
ACCEPT.

Cl 126 SC 126.3.6.2.2 P 93 L 50 # r01-16  
Zimmerman, George Aquantia, and CommS  
Comment Type T Comment Status A PCS  
Figure 126-7 note is incorrect: "Note -- Conversion from 4DPAM-16 symbols occurs in the  
LDPC decoding process. Additionally,  
bits 1724 through 1820 were replaced with zeros in rx\_4D-PAM16<107> through  
rx\_4D-PAM16<113> during the LDPC encoding process."  
Prior to the encoding process, 97 zeros are appended to the aux bit and block of 1625 bits  
to get 1723 bits. The encoder adds 325 bits.  
rx\_4D-PAM16 is symbol based and doesn't have bits.  
SuggestedRemedy  
Replace note  
("Note -- Conversion from 4DPAM-16 symbols occurs in the LDPC decoding process.  
Additionally,  
bits 1724 through 1820 were replaced with zeros in rx\_4D-PAM16<107 through rx\_4D-  
PAM16<113> during the LDPC encoding process.")  
with:  
""Note - Conversion from 4DPAM-16 symbols to bits occurs in the LDPC decoder."  
Response Response Status C  
ACCEPT.

Cl 45 SC 45.2.3.13.1 P 47 L 28 # r01-17  
McClellan, Brett Marvell Semiconducto  
Comment Type ER Comment Status D Management  
"This bit is a reflection of the PCS\_status variable defined in 49.2.14.1 for 10/25GBASE-R"  
25GBASE-R was added in draft 3.1, however Clause 49 specifies 10GBASE-R not  
25GBASE-R.  
SuggestedRemedy  
Either delete 25GBASE-R or reference the appropriate subclause for 25GBASE-R.  
Do the same for page 48 line 10, line24 and line 36.  
Proposed Response Response Status Z  
REJECT.  
This comment was WITHDRAWN by the commenter.  
This is existing text added in IEEE P802.3by. IEEE P802.3by incorporates 25G into  
Clause 49 by reference in Clause 107, including the PCS\_status variable.

Cl 126 SC 126.3.6.2.2 P 109 L 7 # r01-18  
McClellan, Brett Marvell Semiconducto  
Comment Type E Comment Status A Editorial  
typo "tfor"  
SuggestedRemedy  
change "tfor" to "for"  
Response Response Status C  
ACCEPT.

Cl 126 SC 126.3.6.2.2 P 110 L 21 # r01-19  
McClellan, Brett Marvell Semiconducto  
Comment Type GR Comment Status A Editorial  
variable ldpc\_frame\_done is defined but never used.  
SuggestedRemedy  
Delete the variable definition  
Response Response Status C  
ACCEPT.

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Cl 126 SC 126.7.3.1 P 170 L 21 # r01-20  
 McClellan, Brett Marvell Semiconducto

Comment Type E Comment Status A Editorial

Unnecessary commas  
 "While disturbing signals may contain higher frequencies, the received power, which determines the power backoff, is dominated by the power below 100 MHz, for 2.5GBASE-T and 5GBASE-T, and neglecting the frequencies above 100 MHz has no appreciable effect in computing the 2.5GBASE-T or 5GBASE-T power backoff."

*SuggestedRemedy*

change to:  
 "While disturbing signals may contain higher frequencies, the received power which determines the power backoff is dominated by the power below 100 MHz for 2.5GBASE-T and 5GBASE-T. Neglecting the frequencies above 100 MHz has no appreciable effect in computing the 2.5GBASE-T or 5GBASE-T power backoff."

Response Response Status C

ACCEPT.

Cl 126 SC 126.3.2.2.19 P 99 L 49 # r01-21  
 McClellan, Brett Marvell Semiconducto

Comment Type TR Comment Status A EEE

On page 110 line 24 we have a definition of `ldpc_two_frame_done` as the point aligned to the inversion on pair A during PMA training.  
 However on page 99 line 49 and page 124 line 7 the term "even LDPC frame boundary" is used. Is this precise enough to avoid ambiguity?

*SuggestedRemedy*

page 99 line 49  
 change "If the sleep signal begins on an even LDPC frame boundary,"  
 to "If the sleep signal begins on an even LDPC frame boundary aligned to the inversion on pair A during PMA training,"

page 124 line 7  
 change "The link failure signal is sent for 8 LDPC frames and begins on an even LDPC frame boundary."  
 to "The link failure signal is sent for 8 LDPC frames and begins on an even LDPC frame boundary aligned to the inversion on pair A during PMA training."

Response Response Status C

ACCEPT.

Cl 126 SC 126.7.2.3 P 165 L 31 # r01-22  
 McClellan, Brett Marvell Semiconducto

Comment Type TR Comment Status A Cabling

line 21 text and equation 126-12 specifies frequencies of 1 to 250MHz for both 2.5 and 5G, but line 31 indicates only 1 to 100MHz for 2.5G

*SuggestedRemedy*

if the range is 250Mhz for both 2.5 and 5G then delete the frequency ranges on line 31

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Delete "at all frequencies from 1 MHz to 250 MHz." on line 21.