

Comments Received

IEEE P802.3cy D2.1 10G+ Auto Task Force 1st Working Group recirculation ballot comments

Cl 00 SC 0 P L # 785  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status X  
 "groups of 130 65B blocks": elsewhere there are 64B/65B block and 65-bit block  
 SuggestedRemedy  
 Change "65B block" to "64B/65B block" or "65-bit block" as appropriate, throughout  
 Proposed Response Response Status O

Cl 165 SC 165.1.3 P37 L35 # 784  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status X  
 14 062.5 MBd - as the number is more than 10,000 and the space in a number with a decimal part is hard to parse, ...  
 SuggestedRemedy  
 It would be better to put this as 14.0625 GBd throughout. 8 changes.  
 Proposed Response Response Status O

Cl 45 SC 45.2.1.245.1 P27 L20 # 791  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status X  
 SuggestedRemedy  
 Delete red Editorial note.  
 Proposed Response Response Status O

Cl 165 SC 165.1.3 P37 L35 # 793  
 McClellan, Brett Marvell  
 Comment Type E Comment Status X  
 D2.0 comment 637 instruction was not followed: delete 'rates'  
 SuggestedRemedy  
 implement as instructed  
 Proposed Response Response Status O

Cl 105 SC 105.1.2 P33 L42 # 792  
 McClellan, Brett Marvell  
 Comment Type E Comment Status X  
 typo in editor's instruction  
 SuggestedRemedy  
 change 'Insert a new bullet e) in 10.5.2 as shown below.' to 'Insert a new bullet e) in 105.1.2 as shown below.'  
 Proposed Response Response Status O

Cl 165 SC 165.2.2.9.1 P48 L42 # 798  
 Zimmerman, George CME Consulting/APL Gp, Cisco, CommScope, Marve  
 Comment Type E Comment Status X  
 the description of FALSE refers to the PCS where it should refer to the PHY (TRUE refers to the PHY)  
 SuggestedRemedy  
 Change "FALSE PCS is not in state PCS\_Data" to "FALSE PHY is not in state PCS\_Data"  
 Proposed Response Response Status O

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Cl 165 SC 165.3.5 P64 L21 # 803  
 Jonsson, Ragnar Marvell  
 Comment Type ER Comment Status X  
 Incorrect equation numbering: Equaiton identifier (165-1) was previously used for equation on page 58, line 36.  
 SuggestedRemedy  
 Update equation numbers to have consistent unique numbering throughout the document.  
 Proposed Response Response Status O

Cl 165 SC 165.3.5 P64 L21 # 802  
 Jonsson, Ragnar Marvell  
 Comment Type TR Comment Status X  
 Incorrect range in the first case in the equation.  
 SuggestedRemedy  
 Equation (165-1): change "less than or equal to 17654" to "less than 17646" OR to "less than or equal to 17645"  
 Proposed Response Response Status O

Cl 165 SC 165.3.7.3 P68 L16 # 794  
 McClellan, Brett Marvell  
 Comment Type T Comment Status X  
 missing a description of Figure 165–14—EEE transmit state diagram  
 SuggestedRemedy  
 insert "The EEE transmit state diagram shown in Figure 165–14 controls transitions between normal operation and low power idle."  
 Proposed Response Response Status O

Cl 165 SC 165.4.2.4.3 P67 L6 # 786  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status X  
 Partial PHY frame count  
 SuggestedRemedy  
 Delete "PHY". There are a few more  
 Proposed Response Response Status O

Cl 165 SC 165.4.2.4.6 P78 L51 # 790  
 Wienckowski, Natalie General Motors  
 Comment Type T Comment Status X  
 Change based on D2.0 comments #647 and #471.  
 SuggestedRemedy  
 Change: DataSwPFC24 shall be set to an integer multiple of 32. When the value of DataSwPFC24 is a multiple of 16 the switch from PAM2 to PAM4 occurs on a PHY frame boundary.  
 To: When the value of DataSwPFC24 is a multiple of 32 the switch from PAM2 to PAM4 occurs on a L=8 superframe boundary.  
 Proposed Response Response Status O

Cl 165 SC 165.4.2.4.6 P78 L52 # 795  
 McClellan, Brett Marvell  
 Comment Type E Comment Status X  
 delete sentence per instruction of D2.0 comment 710 resolution  
 SuggestedRemedy  
 When the value of  
 delete "When the value of DataSwPFC24 is a multiple of 16 the switch from PAM2 to PAM4 occurs on a PHY frame boundary. DataSwPFC24"  
 Proposed Response Response Status O

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Cl 165 SC 165.4.2.4.6 P79 L1 # 789  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status X  
 SuggestedRemedy  
 Delete red Editorial note.  
 Proposed Response Response Status O

Cl 165 SC 165.4.2.6 P81 L10 # 787  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status X  
 "signaling rate of the SEND\_S signal shall be 703.125 MHz" Is that signaling rate (MBd) or pattern repetition rate?  
 SuggestedRemedy  
 Change MHz to MBd?  
 Proposed Response Response Status O

Cl 165 SC 165.5.2 P93 L25 # 788  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status X  
 "25GBASE-T1: 1x" looks like a leftover from a diagram that included more lanes  
 SuggestedRemedy  
 Delete  
 Proposed Response Response Status O

Cl 165 SC 165.5.3 P93 L17 # 781  
 Dawe, Piers Nvidia  
 Comment Type T Comment Status X  
 For some of the measurements where a high speed signal is to be observed with a scope, there should be a specified scope bandwidth. fb x 3/4 is usual. This standardises the measurement and keeps some irrelevant instrument and DUT noise out of it.  
 SuggestedRemedy  
 This would be beneficial for 165.5.3.2 Transmitter linearity (SNDR), 165.5.3.3.1, 2 Transmit MDI jitter in MASTER mode and 165.5.3.5, and harmless for some others such as droop.  
 Proposed Response Response Status O

Cl 165 SC 165.5.3.3 P95 L5 # 782  
 Dawe, Piers Nvidia  
 Comment Type T Comment Status X  
 Jitter measurement bandwidth "at least 200 MHz" same as it was in 149 for a slower divided clock, and open ended.  
 SuggestedRemedy  
 Should it be increased? Give a value or range rather than "at least"  
 Proposed Response Response Status O

Cl 165 SC 165.5.3.3 P95 L8 # 783  
 Dawe, Piers Nvidia  
 Comment Type T Comment Status X  
 Measuring jitter on 0.4 ms blocks with no clock recovery unit in the measurement gives an extremely low (~ kHz) implied high-pass jitter measurement corner. 165.5.3.3.2 has fn = 2.5 MHz which is much higher.  
 SuggestedRemedy  
 Should there be a "soft" CRU function not just linear regression in the TIE analysis?  
 Proposed Response Response Status O

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IEEE P802.3cy D2.1 10G+ Auto Task Force 1st Working Group recirculation ballot comments

Cl 165 SC 165.5.3.4 P96 L1 # 799

Zimmerman, George CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type T Comment Status X

I realize this is out of scope, and the comment is made to put the issue on the table - for resolution at initial SA ballot. The lower frequency ranges for the PHY, Link Segment specifications, and MDI are all over the place. Starting at 0 Hz is not going to be practical for measurements of a PSD going to up to 13.75 GHz. Likewise, the ANEXT and AFEXT loss are constrained starting at 1 MHz - also too low for practicality. Additionally, the TX PSD lower bound frequency is 5 MHz - below the link segment low frequency limit of the insertion loss. For all of these, going this low won't be necessary for link segments starting at 10 MHz. Suggest they be aligned at 10 MHz.

Unlike my subsequent comments on return loss, I think this comment is likely ready to make the change.

SuggestedRemedy

Change low frequency limit for Upper TX PSD mask (eq 165-6, Pg 96 line 1), Lower TX PSD mask (eq 165-7, Pg 96 line 7), PSANEXT (eq 165-35, Pg 108 line 24), and PSFAEXT (eq 165-36, Pg 109 line 18) to 10 MHz.

Proposed Response Response Status O

Cl 165 SC 165.7.1.3.1 P102 L51 # 800

Zimmerman, George CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type T Comment Status X

(also out of scope)  
Link segment return loss specifications start at 30 MHz, whereas the link segment return loss is constrained (at least) by the Insertion loss between 10 MHz and 30 MHz (at least 6.8dB RL at 10 MHz to meet the IL at 10 MHz)

While I've proposed a remedy, I think this needs further thought and I would be OK rejecting this comment and working on it with the TF for initial SA ballot.

SuggestedRemedy

Consider changing the low frequency limit for link segment return loss Eq 165-17 at pg 102 line 51 from 30 MHz to 10 Mhz and adding a frequency range from 10 Mhz to 30 MHz to Equation 165-17 with value of  $20 - 6.5 * (30-f)/10$  dB  $10 \leq f < 30$  MHz.

Proposed Response Response Status O

Cl 165 SC 165.7.1.3.4 P106 L13 # 796

Sedarat, Hossein Ethernovia

Comment Type T Comment Status X

The last sentence was eliminated from step 8 which makes the last step of ETM calculation procedure incomplete and ambiguous.

SuggestedRemedy

Change the sentency in step 8 to: "Apply steps 3, 4, and 5 to partial response  $g_n^m$  (instead of  $h_n$ ) to calculate the associated REM. The ETM(m) is this REM calculated for  $g_n^m$  and evaluated at  $N_{discard\_etm}$ ."

Proposed Response Response Status O

Cl 165 SC 165.7.1.6 P107 L47 # 797

Sedarat, Hossein Ethernovia

Comment Type T Comment Status X

The maximum propagation delay of 69 ns is excessively large and may unnecessarily add complexity to the echo canceller. A value of 55 ns provides roughly 10% margin with respect to available measurements of current (802.3ch-grade) and future (802.3cy-grade) cables. More discussion on the topic can be found on email reflector: <https://www.ieee802.org/3/B10GAUTO/email/msg00389.html>

SuggestedRemedy

replace 69 ns with 55 ns.

Proposed Response Response Status O

Cl 165 SC 165.8.2.1 P110 L21 # 801

Zimmerman, George CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type T Comment Status X

Why is the link segment return loss only to 30 MHz when the MDI return loss is constrained starting at 5 MHz? These require study and should be considered for changes at initial SA ballot. Whatever considerations are important for one RL are equally applicable to the other. It probably is not relevant to constrain the MDI RL down to 0 dB RL (which is at 5 MHz). At 10 Mhz, the lower end of the IL spec, the MDI RL is 6 dB as written.

While I've proposed a remedy, I think this needs further thought and I would be OK rejecting this comment and working on it with the TF for initial SA ballot.

*SuggestedRemedy*

Change MDI return loss lower limit to 10 MHz. (eq 165-37), pg 110, line 21, maintaining the existing equation, except for the frequency limit change.

Proposed Response Response Status O