Cl **FM** *SC* **FM** *P* **13** *L* **49** # 17

Anslow, Pete Ciena

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

In "adds Clause through Clause 130, Annex 127A, Annex 127B, Annex 128A, Annex 128B, Annex 128C, and Annex 130A."
The first "Clause" should be "Clause 127" and "Annex 127B, " should be deleted.

SuggestedRemedy

Change the first "Clause" to "Clause 127" and delete "Annex 127B, "

Response *Response Status* **C**

ACCEPT.

Cl **31B** *SC* **31B.4.6** *P* **160** *L* **21** # 8

Anslow, Pete Ciena

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

In "Insert a new row for *TIM4aa before the row for *TIM4a …" there should not be a "*" before TIM4aa or TIM4a

SuggestedRemedy

Change "for *TIM4aa before the row for *TIM4a" to "for TIM4aa before the row for TIM4a"

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.89.6** *P* **36** *L* **15** # 18

Anslow, Pete Ciena

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

The text changes in 45.2.1.89.6 are not shown as changes with respect to the base standard.

SuggestedRemedy

Change the editing instruction to: "Change the title and text of 45.2.1.89.6 as follows:"
Change the text to show changes with respect to the text of the base standard which is:
"The PMD signal detect function is optional see 70.6.4. The 1000BASE-X PCS requires signal detect to be one before synchronization can occur. If the signal detect function is not implemented this bit is set to one."

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.3.14.3** *P* **40** *L* **6** # 19

Anslow, Pete Ciena

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

The editing instruction refers to only the first sentence of 45.2.3.14.3, but the complete text is shown.
The first sentence of 45.2.3.14.3 has been modified by IEEE Std 802.3bz-2016
"113.3.6.2.2" should be in Forest green

SuggestedRemedy

Remove the text after the first sentence.
Change the editing instruction to include IEEE Std 802.3bz-2016
Change:
"… and defined by the counter lfer_count in 55.3.6.2 for 10GBASE-T and in 113.3.6.2.2 for 25GBASE-T and 40GBASE-T." to:
"... and defined by counter lfer_count in 126.3.6.2 in 2.5GBASE-T and 5GBASE-T, 55.3.6.2 for 10GBASE-T, and in 113.3.6.2.2 for 25GBASE-T and 40GBASE-T."
Note, the base text shown in the published version of IEEE Std 802.3bz-2016 does not correctly reflect the standard as modified by IEEE Std 802.3bq-2016. The text above is the correct version.
Apply character tag External to "113.3.6.2.2"

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.3.14.4** *P* **40** *L* **22** # 20

Anslow, Pete Ciena

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

The first sentence of 45.2.3.14.4 has been modified by IEEE Std 802.3bz-2016
"113.3.6.2" should be in Forest green

SuggestedRemedy

Change the editing instruction to include IEEE Std 802.3bz-2016
Change:
"… and defined by the counter errored_block_count in 55.3.6.2 for 10GBASE-T and in 113.3.6.2 for 25GBASE-T and 40GBASE-T." to:
"... and defined by counter errored_block_count in 126.3.6.2 in 2.5GBASE-T and 5GBASE-T, 55.3.6.2 for 10GBASE-T and in 113.3.6.2 for 25GBASE-T and 40GBASE-T."
Apply character tag External to "113.3.6.2"

Response *Response Status* **C**

ACCEPT.

Cl **69A** *SC* **69A.2** *P* **161** *L* **30** # 9
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
There is no need to show an external reference as green in an editing instruction.

SuggestedRemedy
Change "Figure 69A-1." to black

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

Cl **69A** *SC* **69A.2** *P* **161** *L* **30** # 10
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
As Figure 69A-1 is the last figure in Annex 69A, a figure inserted after it should be Figure 69A-2

SuggestedRemedy
Change "Figure 59A-1a" to "Figure 69A-2" in the editing instruction and the figure number.

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

Cl **69A** *SC* **69A.2.1** *P* **162** *L* **1** # 11
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
In the editing instruction, change "the 69A.2.1" to "69A.2.1"

SuggestedRemedy
In the editing instruction, change "the 69A.2.1" to "69A.2.1"

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

Cl **69A** *SC* **69A.2.1** *P* **162** *L* **36** # 12
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
Space missing in editing instruction

SuggestedRemedy
Change "69A.2.1as" to "69A.2.1 as"

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

Cl **69A** *SC* **69A.2.1** *P* **162** *L* **40** # 13
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
"requirements or 130.7.1.1" should be "requirements of 130.7.1.1" and "130.7.1.1" should be a cross-reference

SuggestedRemedy
Change "requirements or 130.7.1.1" to "requirements of 130.7.1.1" and make "130.7.1.1" a cross-reference

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

Cl **69A** *SC* **69A.3** *P* **163** *L* **18** # 14
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
"130.6.2" should be a cross-reference

SuggestedRemedy
make "130.6.2" a cross-reference

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

Cl **73** *SC* **73.1** *P* **51** *L* **27** # 21
Anslow, Pete Ciena

Comment Type **E** *Comment Status* **A**
In the added text in Figure 73-1, "2.5 G/b" should be "2.5 Gb/s"

SuggestedRemedy
Change "2.5 G/b" to "2.5 Gb/s"

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

Cl **73** *SC* **73.2** *P* **51** *L* **39** # 22

Anslow, Pete — Ciena

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

The heading shown as "73.2" should be "73.3"

SuggestedRemedy

Change the heading number to 73.3

Response *Response Status* **C**

ACCEPT.

Cl **125** *SC* **125.2.2** *P* **61** *L* **53** # 4

Dudek, Mike — Cavium

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

Missing Clause #

SuggestedRemedy

Add "127" as the missing clause #
Also on page 62 line 5

Response *Response Status* **C**

ACCEPT.

Cl **125** *SC* **125.2.3** *P* **62** *L* **5** # 23

Anslow, Pete — Ciena

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

"in Clause and" should be "in Clause 127 and"

SuggestedRemedy

Change "in Clause and" to "in Clause 127 and"

Response *Response Status* **C**

ACCEPT.

Cl **125** *SC* **125.3** *P* **62** *L* **26** # 24

Anslow, Pete — Ciena

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

Spurious "/" at the end of the editing instruction.
The inserted rows in Table 125-3 should be shown in underline font.
As there are numbers above 10 000 in the Maximum (bit time) column, 1024 and 3540 should have a space as a thousands separator as per the style manual.

SuggestedRemedy

Delete the "/" at the end of the editing instruction.
Show the inserted rows in Table 125-3 in underline font.
Change "1024" to 1 024" and change "3540" to "3 540"

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.6.1.4** *P* **81** *L* **19** # 1

Maguire, Valerie — Siemon

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

It appears that the link to 36.2.4.4 at the end of line 19 is formatted incorrectly and may be broken. (My apologies if this comment is out of scope. If so, kindly advise and I will resubmit against the Sponsor ballot if the link is indeed a problem.)

SuggestedRemedy

Verify that the link to 36.2.4.4 at the end of line 19 is formatted and working correctly.

Response *Response Status* **C**

ACCEPT.

Cl **127** *SC* **127.2.2** *P* **65** *L* **45** # 5

Dudek, Mike — Cavium

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

I don't see a scrambler in the PCS transmit. Having unscrambled data input to 8B10B encoding has in other standards created EMI and adaptive equalizer convergence problems.

SuggestedRemedy

If a scrambler isn't included consider adding one.

Response *Response Status* **C**

REJECT.

Out of scope for this recirculation, this text has been unchanged since Draft 1.0.

This is done intentionally based upon current designs that were argued extensively and agreed on. 10GBASE-KR4 uses unscrambled data.

Cl **127** *SC* **127.2.6.2.1** *P* **85** *L* **19** # 27

Law, David HPE

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

In respect to my comment #362 submitted against D2.0, I note that a TX_XGMII_HI state along with states TX_2.5GPII_4 through TX_2.5GPII_7 have been added. I also note that in the TX_XGMII state the assignments 'xgmii_txc<3:0> <= xgmii_txc_lo<3:0>' and 'xgmii_txd<3:0> <= xgmii_txd_lo<3:0>' have been added. The definition of the xgmii_txc<3:0> and xgmii_txd<31:0> variables however still state that they are latched on the rising or falling edge of TX_CLK and there is no definition of the xgmii_txc_lo and xgmii_txd_lo variables.

Assuming that xgmii_txc_lo and xgmii_txd_lo are TXC and TXC latched on the falling edge of TX_CLK, that xgmii_txc and xgmii_txd are TXC and TXC latched on the rising edge of TX_CLK, and that the TX_XGMII state is entered on the rising edge of TX_CLK, the assignments 'xgmii_txc<3:0> <= xgmii_txc_lo<3:0>' and 'xgmii_txd<3:0> <= xgmii_txd_lo<3:0>' would appear to overwrite the TXC and TXC values just latched on the rising edge. As an aside I would note that the XGMII data bus is 32 bits hence I think the assignment 'xgmii_txd<3:0> <= xgmii_txd_lo<3:0>' should read 'xgmii_txd<31:0> <= xgmii_txd_lo<31:0>'.

It would seem clearer to define xgmii_txc_lo and xgmii_txd_lo as TXC and TXC latched on the falling edge of TX_CLK, and xgmii_txc_hi and xgmii_txd_hi as TXC and TXC latched on the rising edge of TX_CLK, remove the use of xgmii_txc and xgmii_txd, and process xgmii_txc_lo and xgmii_txd_lo as well as xgmii_txc_hi and xgmii_txd_hi directly in the WENCODE function. As suggest that the state TX_XGMII be renamed TX_XGMII_HI to complement the new TX_XGMII_LO state.

SuggestedRemedy

Suggest that:

[1] The definition for xgmii_txc<3:0> and xgmii_txd<31:0> be deleted.
[2] A new definition for xgmii_txc_lo<3:0> be added that reads 'The value of TXC<3:0> latched by the falling edge of TX_CLK.'
[3] A new definition for xgmii_txc_hi<3:0> be added that reads 'The value of TXC<3:0> latched by the rising edge of TX_CLK.'
[4] A new definition for xgmii_txd_lo<31:0> be added that reads 'The value of TXD<31:0> latched by the falling edge of TX_CLK.
[5] A new definition for xgmii_txd_hi<31:0> be added that reads 'The value of TXD<31:0> latched by the rising edge of TX_CLK.

[6] The assignments 'xgmii_txc<3:0> <= xgmii_txc_lo<3:0>' and 'xgmii_txd<3:0> <= xgmii_txd_lo<3:0>' in the TX_XGMII state be deleted.

[7] The variable assignment to the WENCODE function in the TX_XGMII state be change to WENCODE(xgmii_txc_lo<3:0>,xgmii_txd_lo<31:0>,wencode_state).
[8] The variable assignment to the WENCODE function in the TX_XGMII_HI state be change to WENCODE(xgmii_txc_hi<3:0>,xgmii_txd_hi<31:0>,wencode_state).

[9] In the WENCODE function definition the text '... is the xgmii_txc<3:0>, xgmii_txd<31:0>, and ...' be changed to read '... is xgmii_txc_lo<3:0> or xgmii_txc_lo<3:0>, xgmii_txd_lo<31:0> or xgmii_txd_hi<31:0>, and ...'.

[10] Rename the state TX_XGMII to be TX_XGMII_HI

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Should be renamed as follows:
[10] Rename the state TX_XGMII to be TX_XGMII_LO.

Cl **128** *SC* **128.7.1** *P* **110** *L* **26** # 25

Anslow, Pete Ciena

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

1.2.6 in the base standard says that "trailing zeros having no significance"

SuggestedRemedy

Remove any trailing zeros from the draft.
In Table 128-4 change "0.20" to "0.2"
In Table 130-6 change "1.0" to "1"
In Table 128A-1 change "0.20" to "0.2"

Response *Response Status* **C**

ACCEPT.

Cl **128** *SC* **128.7.1.5** *P* **112** *L* **44** # 6

Dudek, Mike Cavium

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

Figure 128-4 does not match the specications in equations 128-3 and 128-4. (The figure is the same as Figure 128-5)

SuggestedRemedy

Correct the figure.

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.1** *P* **167** *L* **14** # 15

Anslow, Pete — Ciena

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

"Annex 128C" should be a cross-reference (3 instances)

SuggestedRemedy

Make "Annex 128C" a cross-reference (3 instances)

Response *Response Status* **C**

ACCEPT.

Cl **128A** *SC* **128A.3.1.7** *P* **172** *L* **33** # 7

Dudek, Mike — Cavium

Comment Type **TR** *Comment Status* **R**

It seems unlikely that an SNDR value of only 5.6dB will provide a 1e-12 error rate. (SNDR is expected to be be un-equalizable noise and a 5.6dB SNR will not provide 1e-12 error rate). The effect of jitter and reflections from a worst case Rx (versus the good test load) will futher degrade the signal beyond this value.

SuggestedRemedy

Determine a reasonable value. Clause 92 uses 26dB which may be higher than necessary.

Make the change on page 175 line 8 as well, and change the SDNR for the drive interference in table 128A-8.

Response *Response Status* **C**

REJECT.

Suggested remedy for part one does not have enough specfic information to implement. Documentation exists that explains the reason for this value.

Out of scope for this recirculation, this text has been unchanged since Draft 1.0.

2nd part of suggested remedy was implemented by changing SDNR to SNDR in the Table 128A-8. This is a duplicate of comment 3.

Cl **128A** *SC* **128A.3.2.2** *P* **176** *L* **15** # 3

Dudek, Mike — Cavium

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

Tables 128A-3, 128A-8, 130A-3 and 130A-8 contain a parameter SDNR that is not defined. From context this should be SNDR

SuggestedRemedy

Change to SNDR in 4 places.

Response *Response Status* **C**

ACCEPT.

Cl **128C** *SC* **128C.3** *P* **202** *L* **2** # 16

Anslow, Pete — Ciena

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

The PICS should reflect the exact title of the Annex.

SuggestedRemedy

On line 2, line 37, line 36, and line 48:
Change "Annex 128C, Test fixtures" to "Annex 128C, Test Fixtures for 2.5 Gb/s and 5 Gb/s Storage Enclosure Interfaces"

Response *Response Status* **C**

ACCEPT.

Cl **130** *SC* **130.7.2.1** *P* **151** *L* **14** # 26

Anslow, Pete — Ciena

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

In Table 130-6 footnote a, "Equation 69A-5" should be Forest green

SuggestedRemedy

Apply character tag External to "Equation 69A-5"

Response *Response Status* **C**

ACCEPT.

Cl **130A** *SC* **130A.3.1** *P* **210** *L* **33** # 2

Dudek, Mike
Cavium

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

An SNDR ratio of 16dB appears marginal to provide a BER of 1e-12 when the additional degradations created by jitter, receiver non ideality and reflections between the host and the receiver are considered.

SuggestedRemedy

Consider whether a higher value should be used.

Response *Response Status* **C**

REJECT.

Suggested remedy does not have enough specfic information to implement.

Out of scope for this recirculation, this text has been unchanged since Draft 1.0.