Cl **105** *SC* **105.2** *P* **21** *L* **22** # 1

Tamura, Kohichi Oclaro

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

Reflect changes from 802.3bq-2016 in title of Table 105-2.

SuggestedRemedy

"25GBASE-R" in title of Table 105-2 should be replaced with "25 Gb/s Ethernet PHYs".

Response *Response Status* **C**

ACCEPT.

Cl **105** *SC* **105.2** *P* **21** *L* **26** # 2

Tamura, Kohichi Oclaro

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

Reflect changes from 802.3bq-2016 in columns of Table 105-2.

SuggestedRemedy

Add column for Clause 28 Auto-Negotiation and for Clause 113 25GBASE-T PCS/PMA.

Response *Response Status* **C**

ACCEPT.

Cl **105** *SC* **105.2** *P* **21** *L* **45** # 3

Tamura, Kohichi Oclaro

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

Reflect changes from 802.3bq-2016 in rows of Table 105-2.

SuggestedRemedy

Add row for 25GBASE-T with corresponding row entries.

Response *Response Status* **C**

ACCEPT.

Cl **108** *SC* **108.7.3** *P* **24** *L* **13** # 4

Tamura, Kohichi Oclaro

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

Reference subclause is missing for LR capability.

SuggestedRemedy

Add 108.5.3.2 to "Subclause" column of table in 108.7.3.

Response *Response Status* **C**

ACCEPT.

Cl **108** *SC* **108.7.3** *P* **24** *L* **16** # 5

Tamura, Kohichi Oclaro

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

Reference subclause is missing for ER capability.

SuggestedRemedy

Add 108.5.3.2 to "Subclause" column of table in 108.7.3.

Response *Response Status* **C**

ACCEPT.

Cl **200** *SC* **200.5.1** *P* **28** *L* **57** # 6

chung, Hwan Seok ETRI

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

In the Figure 200-2, there are some minor mistake to draw the position of TP1 and TP4. The arrow of TP1 and TP4 are not aligned with dotted lines of PMD interface.

SuggestedRemedy

The arrows of TP1 and TP4 should be aligned with dotted lines of PMD interface.

Response *Response Status* **C**

ACCEPT.

Cl **200** *SC* **200.5.1** *P* **28** *L* **1114** # 7

chung, Hwan Seok ETRI

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

There are two arrows indicating MDI points. The MDI arrow in the right side is overlaped with MDI character.

SuggestedRemedy

A gap between the arrow and MDI character should be inserted in the right side of the MDI position.

Response *Response Status* **C**

ACCEPT.

Cl **200** *SC* **200.5.4** *P* **29** *L* **6** # 8

Tooyserkani, Pirooz Cisco

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

In a breakout configuration when turning off the laser is not an option, -30 dBm threshold for Signal_Detect might be too strict and might be difficult to meet

SuggestedRemedy

Relax this figure to -20 dBm

Response *Response Status* **C**

REJECT.

-20dBm can not be applied to 25GBASE-ER, since the sensitivity is comparable to the minimum received power. For 25GBASE-LR, the PSM4 MSA specification for Signal_Detect_fail is -30dBm. The specification as written matches this value, so it does not need to be changed.

Cl **200** *SC* **200.6.1** *P* **30** *L* # 11

Jackson, Kenneth Sumitomo

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

Table 200-6: 25GBASE-ER Avg Launch Power (min) 2 dBm is incorrect.

SuggestedRemedy

This value should be -1.6 dBm because 1.4 dBm OMA with infinite extinction ratio means -1.6 dBm, Average.
Please refer such as Table 88-7 of IEEE Std 802.3TM-2015.

Response *Response Status* **C**

ACCEPT.

Tx Pavg (min) in Table 200-6 will be changed to -1.6 dBm for consistency with prior SMF standards in Ethernet (see 100GBASE-ER4).

Cl **200** *SC* **200.6.1** *P* **30** *L* # 10

Jackson, Kenneth Sumitomo

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

Table 200-6: 25GBASE-LR: Avg Launch Power (min) -6.5 is incorrect.

SuggestedRemedy

The value should be -7.0 dBm because -4 dBm OMA with infinite extinction ratio means -7.0 dBm, Average. Please refer such as Table 88-7 of IEEE Std 802.3TM-2015.

Response *Response Status* **C**

ACCEPT.

Tx Pavg (min) in Table 200-6 will be changed to -7dBm for consistency with prior SMF standards in Ethernet (see 100GBASE-LR4).

Cl **200** *SC* **200.6.1** *P* **30** *L* **43** # 12

chung, Hwan Seok ETRI

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

There is comma between SMSR and min. This comma should be removed.

SuggestedRemedy

change Side-mode suppression ratio(SMSR),(min) to Side-mode supression ratio(SMSR)(min).

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The use of a comma here follows the precedent set by prior standards when there are two abbreviated terms in parentheses and in succession (see Table 88-7). However, what the commenter has noticed is that there are missing commas, such as "(OMA)(max)" in Table 200-6, which should be "(OMA), (max)". So although the comma that the commenter raises should stay, commas need to be added in places where they are missing. These are (1) Tx OMA (max); (2) Tx OMA (min) after footnote; (3) TDP; (4) Rx OMA (max) after footnote; (5) SRS OMA (max) after footnote in Tables 200-6 and 200-7.

Cl **200** *SC* **200.6.1** *P* **30** *L* **49** # 27

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Termination of PSM4 breakout is an important application for 25GBASE-LR. Tx Pavg (max) Tx was matched to PSM4 Rx Pavg (max) to avoid overload. Need similar change to Tx OMA (max), which currently exceeds PSM4 Rx OMA (max).

SuggestedRemedy

Propose changing Tx OMA (max) of 25GBASE-LR from 3 dBm to 2.2 dBm.

Response *Response Status* **C**

ACCEPT.

Comment was first raised to attention in San Diego. Tx OMA (max) will be changed to 2.2 dBm.

Cl **200** *SC* **200.6.1** *P* **31** *L* **17** # 9

Tamura, Kohichi Oclaro

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

Hit ratio is 5x10^-5, but it should be same as 25GBASE-SR, which is 1.5x10^-3, per discussion in 8/24 adhoc.

SuggestedRemedy

Change hit ratio to 1.5x10^-3 in Table 200-6.

Response *Response Status* **C**

REJECT.

Need to verify that 1.5x10^-3 is an appropriate value for the eye mask chosen for 25GBASE-LR and ER.

Cl **200** *SC* **200.6.2** *P* **32** *L* # 19

Jackson, Kenneth Sumitomo

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

Table 200-7: 25GBASE-ER: Avg Receiver Power (min) -16 dBm.

SuggestedRemedy

This value should be -19.6 dBm.
When we assume 1.4 dBm, OMA transmitter output, 0 dB TDP and insertion loss of 18 dB, received power is -16.6 dBm, OMA. By applying infinite extinction for transmitter, -16.6 dBm,OMA represents -19.6 dBm, Average.
Please refer such as Table 88-8 of IEEE Std 802.3TM-2015.

Response *Response Status* **C**

ACCEPT.

Since infinite ER was accepted for Pavg (min) relationship to OMA (min), Pavg (min) of Rx should have corresponding change to -16 dBm.

Cl **200** *SC* **200.6.2** *P* **32** *L* # 20

Jackson, Kenneth Sumitomo

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

Table 200-7: 25GBASE-LR: Avg Receive Power (min) -12.8 dBm.

SuggestedRemedy

This value should be -13.3 dBm.
When we assume -4 dBm, OMA transmitter output, 0 dB TDP and insertion loss of 6.3 dB, received power is -10.3 dBm, OMA. By applying infinite extinction for transmitter, -10.3 dBm,OMA represents -13.3 dBm, Average.
Please refer such as Table 88-8 of IEEE Std 802.3TM-2015.

Response *Response Status* **C**

ACCEPT.

Since infinite ER was accepted for Pavg (min) relationship to OMA (min), Pavg (min) of Rx should have corresponding change to -12.8 dBm.

Cl **200** *SC* **200.6.2** *P* **32** *L* **26** # 28

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Rx OMA (max) of 25GBASE-LR should be matched to any changes in Tx OMA (max).

SuggestedRemedy

Propose changing Rx OMA (max) of 25GBASE-LR from 3 dBm to 2.2 dBm of Tx OMA (max) is changed.

Response *Response Status* **C**

ACCEPT.

Comment was first brought to attention in San Diego. Rx OMA (max) will be changed to 2.2 dBm.

Cl **200** *SC* **200.6.2** *P* **32** *L* **31** # 16

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Value for stressed receiver sensitivity TBD of 25GBASE-LR.

SuggestedRemedy

Propose -8.8 dBm.

Response *Response Status* **C**

ACCEPT.

Accept specification proposed in tamura_3cc_02_0916.pdf.

Cl **200** *SC* **200.6.2** *P* **32** *L* **35** # 17

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Value for vertical eye closure penalty TBD of 25GBASE-LR.

SuggestedRemedy

Propose -1.9 dB.

Response *Response Status* **C**

ACCEPT.

Accept specification proposed in tamura_3cc_02_0916.pdf.

Cl **200** *SC* **200.6.2** *P* **32** *L* **37** # 18

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Value for J2 jitter TBD of 25GBASE-LR.

SuggestedRemedy

Propose 0.27 UI.

Response *Response Status* **C**

ACCEPT.

Accept specification proposed in tamura_3cc_02_0916.pdf.

Cl **200** *SC* **200.6.2** *P* **32** *L* **39** # 13

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Value for J4 jitter TBD of 25GBASE-LR.

SuggestedRemedy

Propose 0.39 UI.

Response *Response Status* **C**

ACCEPT.

Accept specification proposed in tamura_3cc_02_0916.pdf.

Cl **200** *SC* **200.6.2** *P* **32** *L* **41** # 15

Tamura, Kohichi Oclaro

Comment Type **TR** *Comment Status* **A**

Hit ratio needs to be added to SRS eye mask definition.

SuggestedRemedy

Add hit ratio of 5x10^-5 (see 25GBASE-SR).

Response *Response Status* **C**

ACCEPT.

Add hit ratio of 5x10^-5 to SRS eye mask of 25GBASE-LR.

Cl **200** *SC* **200.6.2** *P* **32** *L* **41** # 14

Tamura, Kohichi — Oclaro

Comment Type **TR** *Comment Status* **A**

SRS eye mask definition for 25GBASE-LR.

SuggestedRemedy

Propose {0.24, 0.5, 0.5, 0.24, 0.24, 0.4}

Response *Response Status* **C**

ACCEPT.

Accept specification proposed in tamura_3cc_02_0916.pdf.

Cl **200** *SC* **200.6.3** *P* **33** *L* # 22

Jackson, Kenneth — Sumitomo

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

Table 200-8: 25GBASE-ER: Power Budget for maximum TDP(1st row): "blank"

SuggestedRemedy

This value should be 20.7 dB (18 dB channel insertion loss (max) + 2.7 dB TDP (max).
25GBASE-ER scheme is not same as 100GBASE-ER4, thus Power budget (for maximum TDP) should be applied instead of Power budget.

Response *Response Status* **C**

ACCEPT.

Using the IEEE budget methodology, the power budget for 25BASE-ER is 20.7 dB (channel loss + maximum TDP).

Cl **200** *SC* **200.6.3** *P* **33** *L* # 23

Jackson, Kenneth — Sumitomo

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

Table 200-8: 25GBASE-LR/ER: "Power Budget" (2nd row).

SuggestedRemedy

Remove this row entirely.

Response *Response Status* **C**

ACCEPT.

This row will become empty when the budget methodology of IEEE is applied to 25GBASE-ER. The row will be removed at that time.

Cl **200** *SC* **200.6.3** *P* **33** *L* # 24

Jackson, Kenneth — Sumitomo

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

Table 200-8: 25GBASE-ER: Allocation for penalties (for maximum TDP)

SuggestedRemedy

This value should be 2.7 dB.
25GBASE-ER scheme is not same as 100GBASE-ER4, thus Power budget (for maximum TDP) should be applied instead of Power budget.

Response *Response Status* **C**

ACCEPT.

This is consistent with what is also in the Editor's Note in 200.6.3. The budget for 25GBASE-ER needs to be revised to conform with the IEEE budget method. 2.7 dB will be added to Table 200-8 in Allocation for penalties (for maximum TDP).

Cl **200** *SC* **200.6.3** *P* **33** *L* # 25

Jackson, Kenneth — Sumitomo

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

Table 200-8: 25GBASE-LR/ER: Allocation for penalties

SuggestedRemedy

Remove row entirely

Response *Response Status* **C**

ACCEPT.

This row will be removed when the power budget for 25GBASE-ER conforms to the IEEE methodology. The value for 25GBASE-ER will disappear, and so the row will be removed.

Cl **200** *SC* **200.6.3** *P* **33** *L* **26** # 21

McDermott, Thomas — Fujitsu

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

Table 200-8 is missing units for two rows: Channel insertion loss (min), and Allocation for penalties (refering to ER penalities).

SuggestedRemedy

Insert dB in two places in the Unit column of the tabs that are currently blank.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Unit of "dB" is missing from minimum channel insertion loss. Allocation for penalties row will disappear when 25GBASE-ER is made consistent with IEEE budget methodology.

Cl **200** *SC* **200.6.3** *P* **33** *L* **1930** # 26

chung, Hwan Seok
ETRI

Comment Type **E** *Comment Status* **R**

In the entire document, the maximum and the minimum value are expressed with max or min. However, to describe power budeget(for maximum TDP) and Allocation for penalties (for maximum TDP), maximum is used. Thus, it will be more appropriated change from 'for maximum TDP' to 'for max TDP).

SuggestedRemedy

it would be better to use 'for max TDP' instead of 'for maximum TDP.'

Response *Response Status* **C**

REJECT.

The word "maximum" is not just used with TDP but appears in other places, as well, such as "Maximum discrete reflectance". The abbreviated forms of "max" and "min" only occur when it is a single word in parentheses, which is consistent with prior usage.