Cl **00** *SC* **0** *P* **36** *L* **28** # 30

Kobayashi, Shigeru — TE Connectivity

Comment Type **E** *Comment Status* **X**

Mix to use the words "optical fiber" and "POF" in spite of stated at the beginning as "POF". Is there any different meaning?

SuggestedRemedy

Accommodate to use "POF"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.6** *P* **23** *L* **19** # 1

Gilarranz, Alejandra — KDPOF

Comment Type **E** *Comment Status* **X**

Table 45-7. Description column. There are two bit assignments for 1000BASE-RHC PMA/PMD, and none for 1000BASE-RHB PMA/PMD.

SuggestedRemedy

Replace "100100 = 1000BASE-RHC PMA/PMD" by "100100 = 1000BASE-RHB PMA/PMD" in table.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.6** *P* **23** *L* **19** # 17

Tapia, Pablo — KDPOF

Comment Type **E** *Comment Status* **X**

Two values assigned to 1000BASE-RHC and none to 1000BASE-RHB.

SuggestedRemedy

Assign one value for 1000BASE-RHB and one for 1000BASE-RHC.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.51** *P* **28** *L* **21** # 2

Gilarranz, Alejandra — KDPOF

Comment Type **T** *Comment Status* **X**

Table 45-164. Description column. Wrong description of 0 value for Rx LPI indication.

SuggestedRemedy

Replace text: "LPI not received by Rx PCS" with "LPI not generated by Rx PCS".

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.51** *P* **28** *L* **29** # 3

Gilarranz, Alejandra — KDPOF

Comment Type **T** *Comment Status* **X**

Table 45-164. Description column. The description of 0 value for Remote OAM ability should refer to remote PHY, not to PHY. The same mistake appears in the same column, line 32, in the description of Remote EEE ability.

SuggestedRemedy

Replace the text: "0=The PHY does not have OAM ability or it is disabled" with the text: "0=The remote PHY does not have OAM ability or it is disabled"

Proposed Response *Response Status* **W**

Cl **45** *SC* **45.2.3.53.1** *P* **31** *L* **3** # 4

Gilarranz, Alejandra — KDPOF

Comment Type **E** *Comment Status* **X**

Typing error.

SuggestedRemedy

Replace text: "These bits reports the link margin..." with: "These bits report the link margin..."

Proposed Response *Response Status* **O**

Cl **114** *SC* **2.3.1** *P* **42** *L* **19** # 10

Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**

For consistency, should specify when is the CRC logic reset.

SuggestedRemedy

"... are initialized to 0 at the beginning of each PHD."

Proposed Response *Response Status* **O**

Cl **114** *SC* **3.4** *P* **64** *L* **12** # 14

Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**

Typo, ".. with respect to minimum SNR to provided loc_rcvr_status=OK ..".

SuggestedRemedy

Should read: ".. with respect to minimum SNR to provide loc_rcvr_status=OK .." (remove extra "d" in "provide").

Proposed Response *Response Status* **O**

Cl **114** *SC* **3.5.1** *P* **66** *L* **48** # 15

Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**

Typo: ".. clock is stable an phase adjusted ..".

SuggestedRemedy

Missing "d", should read: ".. clock is stable and phase-adjusted ..".

Proposed Response *Response Status* **O**

Cl **114** *SC* **3.7.2** *P* **76** *L* **41** # 11

Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**

Typo, ceil symbol instead of brackets.

SuggestedRemedy

Use brackets as in formula 114-22.
Same typo on p.77 l.18.

Proposed Response *Response Status* **O**

Cl **114** *SC* **3.7.4** *P* **77** *L* **40** # 12

Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**

Mention to state PMAMON_SYNCH is unnecessary.

SuggestedRemedy

Should remove for clarity, leave only: "... to OK (state PMAMON_OK). After at least...".
The assignment LOCPHD.RX.LINKSTATUS=OK in state PMAMON_SYNCH does not appear in the diagram (figure 114-42); is implicit in PMAMON_SYNCH and PMAMON_UPDATE but not needed.

Proposed Response *Response Status* **O**

Cl **114** *SC* **5** *P* **84** *L* **13** # 13

Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**

Expression clarity: "... only change the data symbols ...".

SuggestedRemedy

Suggest to remove "data" and add the missing "do":
"The test modes only change the symbols provided to the transmitter circuitry and do not alter the optical and jitter...".

Proposed Response *Response Status* **O**

Cl **114** *SC* **6** *P* *L* # 37

Stassar, Peter Huawei Technologies

Comment Type **TR** *Comment Status* **X**

General:
It should be emphasized that 2 out of 3 applications spaces, namely home and automotive, really will need plug-and-play devices on a standard type of POF, which implies that no additional requirements beyond a certain length of a specific type of POF should be necessary. Clause 114.6 contains requirements for transfer characteristics which seem to indicate more specific requirements than only a specific type of POF.
I haven't seen any presentation from the Task Force meetings, with some form of evidence, that a set of devices, when meeting these requirements, a will operate satisfactorily in the field on a standard version of POF, and that, when they fail these requirements, they do not operate in the field.
I remain therefore unconvinced that this Optical specification is sufficiently complete and therefore have the opinion that the Task Force has completed its work.

SuggestedRemedy

Need a proper specification enabling plug-and-play

Proposed Response *Response Status* **O**

Cl **114** *SC* **6.3.1** *P* **92** *L* **23** # 33

Stassar, Peter Huawei Technologies

Comment Type **ER** *Comment Status* **X**

"the mode power distribution (MPD) shall be higher than the lower bound limit defined in Table 114-7 per measurement techniques defined in 114.6.4.".
This is an ambiguous requirement. Do you mean for "higher" for each of the rows in Table 114-7?

SuggestedRemedy

Replace "limit" by "limits"

Proposed Response *Response Status* **O**

Cl **114** *SC* **6.3.3** *P* **94** *L* **36** # 34

Stassar, Peter Huawei Technologies

Comment Type **ER** *Comment Status* **X**

Table 114-8 contains Type I, Type II and Type III.
It is not clarified what these Types refer to. I am under the assumption these are related to the channel types defined in 114.6.5.1 - 144.6.5.3, but that is not obvious.

SuggestedRemedy

Clarify the intent of Type I, II and III in Table 114-8

Proposed Response *Response Status* **O**

Cl **114** *SC* **6.4.4** *P* *L* # 35

Stassar, Peter Huawei Technologies

Comment Type **TR** *Comment Status* **X**

"Rise time is measured as the time needed to transition the optical signal from (0.1·P1 + 0.9·P0) to (0.1·P0 + 0.9·P1). The fall time is measured as the time needed to transition the optical signal from (0.1·P0 + 0.9·P1) to (0.1·P1 + 0.9·P0)."
It is necessary to include a reference to what P0 and P1 are to be. I think I understand what is being "meant" but it needs to be specific.
Also "P1 is specified 15 ns after the rising-edge crossing of the optical signal with the average optical power (AOP) level. Similarly, P0 is specified 15 ns after the falling-edge AOP crossing."
Is this a definition or also a test?
Is the test point right at 15 ns or is there a "time range" or +/- range on 15 ns.

SuggestedRemedy

Improved specification is required

Proposed Response *Response Status* **O**

Cl **114** *SC* **6.4.6** *P* *L* # 36

Stassar, Peter Huawei Technologies

Comment Type **TR** *Comment Status* **X**

Transmitter overshoot measurement:
How to measure Pmax and Pmin is not provided.

SuggestedRemedy

Add measurement method

Proposed Response *Response Status* **O**

Cl **114** *SC* **8.1** *P* **106** *L* **6** # 16
Mendo, Carmen KDPOF

Comment Type **E** *Comment Status* **X**
Typo: "Bits TXO_TYPE of register 3.500 is copied ...".

SuggestedRemedy
Should read: "Bits TXO_TYPE of register 3.500 are copied ...".

Proposed Response *Response Status* **O**

Cl **114** *SC* **114** *P* **41** *L* **11** # 7
Gilarranz, Alejandra KDPOF

Comment Type **E** *Comment Status* **X**
Duplicated full stop.

SuggestedRemedy
Remove duplicated full stop.

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.2** *P* **38** *L* **5** # 5
Gilarranz, Alejandra KDPOF

Comment Type **E** *Comment Status* **X**
Missign full stop.

SuggestedRemedy
Full stop must be added.

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.2** *P* **38** *L* **5** # 18
Tapia, Pablo KDPOF

Comment Type **E** *Comment Status* **X**
Missing period at end of line:
"The symbols are transmitted at a nominal rate of 325 MHz"

SuggestedRemedy
"The symbols are transmitted at a nominal rate of 325 MHz."

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.2.1** *P* **38** *L* **24** # 6
Gilarranz, Alejandra KDPOF

Comment Type **E** *Comment Status* **X**
Missing parenthesis.

SuggestedRemedy
Parenthesis must be added.

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.2.2.1** *P* **40** *L* **36** # 19
Tapia, Pablo KDPOF

Comment Type **E** *Comment Status* **X**
Using ASCII decimal value '48' of char '0' in code specification might be confusing.

SuggestedRemedy
Consider changing the code description to:
double(dec2bin(hex2dec(seed))) - double('0');

or provide a name for constant '48' such as:
ASCII_0=48;
double(dec2bin(hex2dec(seed))) - ASCII_0;

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.2.4.1.1** *P* **46** *L* **9** # 24
Ortiz Rojo, David KDPOF

Comment Type **E** *Comment Status* **X**
There is an error in figure 114-15. The third octect that appears in the figure (after the OFS 'data' octets) have a CTRL information with subindex '1', however that row may correspond to more than a single octect, it would be better to replace the subindex '1' by subindex 'i' to indicate that.

SuggestedRemedy
Replace CTRL_1 in the figure by CTRL_i

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.2.4.1.1** *P* **46** *L* **33** # 20

Tapia, Pablo KDPOF

Comment Type **T** *Comment Status* **X**

The first CB of a PDB.CTRL always corresponds to the first control sample of a GMII chunk. The following sentence is not correct:
"(This CB may encode the first control sample of GMII chunk, or the CB may correspond to another control sample of GMII chunk if it has been moved ahead of other data octets in the PDB.CTRL.)"

SuggestedRemedy

It might be replaced by:
"(This CB may encode the first 10-bit sample of the GMII chunk, or the CB may correspond to another 10-bit sample of the GMII chunk if it has been moved ahead of other data octets in the PDB.CTRL.)"

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.3.5.1** *P* **66** *L* **49** # 9

Gilarranz, Alejandra KDPOF

Comment Type **E** *Comment Status* **X**

Typing error.

SuggestedRemedy

Replace text: "OK: clock is stable an phase adjusted..."
with: "OK: clock is stable and phase adjusted..."

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.3.6.2** *P* **74** *L* **27** # 22

Tapia, Pablo KDPOF

Comment Type **TR** *Comment Status* **X**

In figure 114-40, loc_thp_coef is updated in the same Transmit Block that is sending the new value of LOCPHD.TX.NEXT.THP.SETID (let's call this Transmit Block "i"). This will cause a failure in the receiver that will not change the THP coef set until the next Transmit Block "i+1".

SuggestedRemedy

1) Remove the following assignment in THPTX_ANNOUNCE_REQ state.
LOCPHD.TX.NEXT.THP.SETID <= req_thp_setid
2) Add the following assignment to THPTX_RECEIVE_REQ:
LOCPHD.TX.NEXT.THP.SETID <= REMPHD.RX.REQ.THP.SETID
3) To improve description clarity change the following sentence in page 74 line 51:
"Triggered with the start of a new Transmit Block a transition to THPTX_ANNOUNCE_REQ occurs, where the local PHY announces that requested coefficients will be used (LOCPHD.TX.NEXT.THP.SETID <= req_thp_setid)."
To:
"Triggered with the start of a new Transmit Block a transition to THPTX_ANNOUNCE_REQ occurs, where the local PHY announces that requested coefficients will be used (LOCPHD.TX.NEXT.THP.SETID <= req_thp_setid assignment of previous state).

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.3.6.3** *P* **75** *L* **30** # 23

Tapia, Pablo KDPOF

Comment Type **T** *Comment Status* **X**

In figure 114-41, there is no reason to wait for a new_txblock_event to leap from THPREQ_STORE state to THPREQ_REQUEST state. An unneeded delay of 1 Transmit Block can be saved if the transition between states takes place unconditionally.

SuggestedRemedy

Change state transition condition to UCT.

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.4.1** *P* **81** *L* **9** # 8

Gilarranz, Alejandra KDPOF

Comment Type **T** *Comment Status* **X**

The text does not mention that scramblers must preserve timing during quiet mode.

SuggestedRemedy

The following text is suggested: "Payload binary scrambler and payload symbol scrambler also preserve timing during quiet mode. Scramblers value when PHY re-enters normal operation is the same as it would have been in the absence of an LPI interval."

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.2.1** *P* **89** *L* **32** # 31

Kobayashi, Shigeru TE Connectivity

Comment Type **E** *Comment Status* **X**

Generally do not use the word "Optical Fiber media" in Figure 114-46

SuggestedRemedy

Remove "media" or "Fiber"

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.3.1** *P* **93** *L* **20** # 28

Takahashi, Satoshi POF Pormotion

Comment Type **TR** *Comment Status* **X**

Table 114-7. Transfer function lower bounds of A4a.2 POFs measured under launch condition specified in Table 114-7 do not fulfill the transfer function lower bound limits in figure 114-49 through 114-51. EAF at TP2 shall be more lower modes launch condition. See "takahashi_3bv_02_0116.pdf"

SuggestedRemedy

Change Table 114-7 accoding to "takahashi_3bv_01_0116.pdf"

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.3.1** *P* **94** *L* **24** # 32

Kobayashi, Shigeru TE Connectivity

Comment Type **E** *Comment Status* **X**

It would be good to have the information what this chart is.

SuggestedRemedy

Add "lower bound limit" between MPD and illustration of Figure 114-48 => Figure 114-48-Transmit MPD lower bound limit per EAF illustration according to Table 114-7

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.3.3** *P* **94** *L* **1** # 29

Takahashi, Satoshi POF Pormotion

Comment Type **TR** *Comment Status* **X**

Figure 114-48. Transfer function lower bounds of A4a.2 POFs measured under launch condition specified in Table 114-7 do not fulfill the transfer function lower bound limits in figure 114-49 through 114-51. EAF at TP2 shall be more lower modes launch condition. See "takahashi_3bv_02_0116.pdf"

SuggestedRemedy

Change the figure according to the amended values in Table 114-7 in "takahashi_3bv_01_0116.pdf".

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.3.3** *P* **94** *L* **1** # 27

Takahashi, Satoshi POF Pormotion

Comment Type **E** *Comment Status* **X**

The Figure 114-48 is transmitter optical specification

SuggestedRemedy

Place the figure in subclass 114.6.3.1

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.4.8** *P* **98** *L* **8** # 21

Tapia, Pablo KDPOF

Comment Type **E** *Comment Status* **X**

Variable "l0" might be confused with number "10".

SuggestedRemedy

Reanme variable l0 (i.e. len0).

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.6.5.4** *P* **104** *L* **48** # 38

Pérez-Aranda, Rubén KDPOF

Comment Type **E** *Comment Status* **X**

Subclause "Worst-case 1000BASE-RHx link power budget (informative)" relates to specifications of the optical tramitter, the optical receiver and the fiber optics channel. Therefore, it should be H3, out of the subclause 114.6.5.

SuggestedRemedy

Move subclause to new 114.6.6.

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.12** *P* **115** *L* **10** # 25

Ortiz Rojo, David KDPOF

Comment Type **T** *Comment Status* **X**

Our implementation work indicates that 6000 bits times is feasible but meeting 6000 bit times delay requirement might be not easy.

SuggestedRemedy

Increase the delay requirement to 6500 bit times for greater implementation flexibility and margin that would benefit the market.

Proposed Response *Response Status* **O**

Cl **114** *SC* **114.12** *P* **115** *L* **16** # 26

Ortiz Rojo, David KDPOF

Comment Type **T** *Comment Status* **X**

The POF fiber typically introduces a delay of about 5 bit times per meter. This implies that a 50 meter POF link introduces a delay of 250 bit times, which is not neglible.

SuggestedRemedy

Remove the last part of the sentence, the sentence would be then:

"NOTE 2—The physical medium interconnecting two PHYs introduces additional delay in a link."

Proposed Response *Response Status* **O**