| C/ 0 SC 0 Berger, Catherine | Р | L | # r01-6 | <i>Cl</i> 0 Berger, C | SC 0 atherine | | Р | L | # r01-4 |
|--|---|---------------------|--------------------------|---------------------------------|---|--|---------------|---------------------|--|
| Comment Type E C There is a stray colon at the | Comment Status D end of subclause 115.3 | 7.3. | | Commen "Tabl | | Comment Sta (1976, 1668) codev | | cell in column th | ree that only has an "f" |
| SuggestedRemedy | | | | 00 | dRemedy | | | | |
| Proposed Response Re PROPOSED REJECT. | esponse Status W | | | Proposed | e change the co <i>Response</i> POSED REJEC | Response Sta | - | "t" in it as approp | priate, if necessary. |
| Stray colon not found. | | | | | | | BCH code | word is compose | d by 1668 bits. These |
| 51 | P Comment Status D | L | # [<u>r01-5</u> | 4 bits | (remainder of 1 ultiple of 64. "f" | | to be inclue | ded in a separate | e format, except the last d cell because 1668 is lue of those 4 bits |
| IEEE capitalizes the first lett SuggestedRemedy Please capitalize the first let | | | 5.12.3. | 91A-2 | 2 shows a 140-b | s on using similar ta bit parity that is divi 15A is also consiste | ded in 64-b | it groups and the | , see Annex 91A. Table last one is also |
| Proposed Response Re PROPOSED ACCEPT IN P | esponse Status W RINCIPLE. | | | <i>CI</i> 0 Berger, C | SC 0 atherine | | Р | L | # r01-8 |
| Other lists in the draft do no referenced by the comment cited list: | | | | | e note that in th | <i>Comment Sta</i> ne new clauses, the EEE uses an en-da | subtractio | | ymbol appears most |
| - 115.1.1 Capitalize each of the list items is a sentenc | | | nd because at least one | Suggeste | dRemedy | | | | |
| - Page 53, line 46 Replace | e end comma with perio | d in item 4). | | • | Response POSED ACCEP | Response Sta PT IN PRINCIPLE. | ntus W | | |
| - Page 60, line 28 Add en | d period to item 1). | | | Edito | r to search draft | for hyphens used | as arithme | tic minus signs ai | nd replace those found |
| - Page 85, line 32 Capitali the end punctuation on all li | | ecause no list ite | em is a sentence, delete | with e synta | | n to be kept in Matl | ab code pa | aragraphs to be c | onsistent with Matlab |
| - Page 101, line 15 add m | issing period/full stop a | t end of list item | 4). | | | | | | |
| - Page 105, line 7 Capitali | ize list items. | | | | | | | | |
| - Page 111, line 27 Capita punctuation on each list iten | - | nd" on last list it | em, and delete end | | | | | | |
| 115.12.3 Capitalize as su | ggested, additionally de | lete end punctu | ation on each list item. | | | | | | |
| TYPE: TR/technical required EF COMMENT STATUS: D/dispatc SORT ORDER: Clause, Subclau | hed A/accepted R/reje | | | | U/unsatisfied | Z/withdrawn | CI (SC (| | Page 1 of 7 11/3/2016 10:55:5 |

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| | P49 | L36 | # r01-11 | | SC 115.3.5.1 | P70 | L 2 | # r01-10 |
|--|--|---|--------------------------------------|------------------|-------------------------------|--|-------------------|--------------------|
| .aw, David | Hewlett Packa | ard Enter | | Law, David | | Hewlett Pa | ickard Enter | |
| Comment Type T | Comment Status D | | Late | Comment Typ | be T | Comment Status D | | La |
| | that the 704 PHD bits are use | ed to compute the | e CRC16 should be | | | iable 'rcvr_clock_lock' sta | | |
| specified. | | | | | | espite this the variable 'rcv e of Figure 115-23 'PHY F | | |
| SuggestedRemedy | | | | | | her state diagram. A simil | | |
| | ID bits are then used to comp s, in transmit bit order, are the | | | | | s 'Variable set by the PHY X_DISABLE state of Figu | | |
| Proposed Response | Response Status W | | | – SuggestedRe | | _ 0 | | |
| PROPOSED ACCEPT. | | | | | | of the variables in 115.3.5 | | |
| C/ 115 SC 115.3.5.1 | P 69 | L25 | # r01-13 | | k_lock <= NO 115-23 be del | T_OK' and 's1_synch <= I | NOT_OK' in the PN | MARX_DISABLE state |
| .aw. David | Hewlett Packa | | # 101-13 | Proposed Res | | Response Status W | | |
| - , | | | 1 | , | , | Response Status W | | |
| Comment Type E | Comment Status D | | Late | PROPOS | ED ACCEPT. | | | |
| | S IS LISED DV FIDLIRE 115-22 P | HY IX CONTROL | | | | | | |
| I believe that link_statu | | | | | | | | |
| SuggestedRemedy | | | | | | | | |
| _ SuggestedRemedy | X and RX PHY control state of | | uld read ' PHY TX | | | | | |
| – SuggestedRemedy Suggest that ' PMA T | X and RX PHY control state of | | uld read ' PHY TX | | | | | |
| - SuggestedRemedy Suggest that ' PMA T and PHY RX control sta | X and RX PHY control state of ate diagrams' Response Status W | | uld read ' PHY TX | | | | | |
| - SuggestedRemedy Suggest that ' PMA T and PHY RX control sta Proposed Response | X and RX PHY control state of ate diagrams' Response Status W | | uld read ' PHY TX # <u>r01-12</u> | | | | | |
| GuggestedRemedy Suggest that ' PMA T and PHY RX control sta Proposed Response PROPOSED ACCEPT. | X and RX PHY control state of ate diagrams' Response Status W | diagrams' shoi L 25 | | | | | | |
| SuggestedRemedy Suggest that ' PMA T and PHY RX control sta Proposed Response PROPOSED ACCEPT. | X and RX PHY control state of ate diagrams' Response Status W | diagrams' shoi L 25 | | | | | | |
| Cl 115 SC 115.3.5.1 | X and RX PHY control state of ate diagrams' Response Status W P69 Hewlett Packa Comment Status D | diagrams' shoi L 25 | # <u>r01-12</u> | | | | | |
| SuggestedRemedy Suggest that ' PMA T and PHY RX control sta Proposed Response PROPOSED ACCEPT. Cl 115 SC 115.3.5.1 .aw, David Comment Type E | X and RX PHY control state of ate diagrams' Response Status W P69 Hewlett Packa Comment Status D | diagrams' shoi L 25 | # <u>r01-12</u> | | | | | |
| Classing Suggested Remedy Suggest that ' PMA T and PHY RX control sta Proposed Response PROPOSED ACCEPT. Classing Science Science Suggested Remedy | X and RX PHY control state of ate diagrams' Response Status W P69 Hewlett Packa Comment Status D | diagrams' shor <i>L</i> 25 ard Enter | # <u>r01-12</u> Late | | | | | |
| Comment Type E Typo, 'diagrams' should Suggest that ' PMA T and PHY RX control sta Proposed Response PROPOSED ACCEPT. Cl 115 SC 115.3.5.1 aw, David Comment Type E Typo, 'diagrams' should Suggest that ' the link | X and RX PHY control state of ate diagrams' <i>Response Status</i> W <i>P</i> 69 Hewlett Packa <i>Comment Status</i> D d be 'diagram'. | diagrams' shor <i>L</i> 25 ard Enter | # <u>r01-12</u> Late | | | | | |

C/ 115 SC 115.3.5.1 Page 2 of 7 11/3/2016 10:55:56 PM

| C/ 115 | SC 115.3.5.1 | P 70 | L 44 | # r01-14 |
|------------|--------------|---------------|-------------|----------|
| Law, David | | Hewlett Packa | ard Enter | |

Comment Type T Comment Status D

Late

The definition of the tx_gmii_enable variable states that it is used to '... connect or disconnect the 64B/65B encoder to the GMII transmit data stream ...'. Subclause 115.3.5.2 'PHY TX control state diagram' also states that 'If one of the link partners fails to receive payload data sub-blocks with reliability (link_status = FAIL), the 64B/65B PCS encoder is disconnected from the GMII transmit stream until the bidirectional link is re-established.'. Despite these statements I can't find any reference to tx_gmii_enable in subclause 115.2.1 'Transmit Block' or in subclause 115.2.4.1.1 '64B/65B encoding'.

SuggestedRemedy

Suggest that mention of tx_gmii_enable should be made in subclause 115.2.4.1.1 or 115.2.4.1.2.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

In page 71, line 35, it is stated: "While establishing the bi-directional link, the 64B/65B PCS encoder is not connected to the GMII transmit stream (tx_gmii_enable <= FALSE), it generates PDB.CTRL blocks encoding normal inter-frame (idle) information to fill the payload data sub-blocks (see 115.2.4.1.1). ". Also in page 70, line 49, it is stated: "FALSE: 64B/65B encoder is not connected to GMII transmit data stream (normal inter- frame is encoded in transmitted PDBs) ".

Although it is defined the behavior of the 64B/65B encoder when tx_gmii_enable is FALSE, the draft can be improved in the sense that no specification is provided in this respect (there is not "shall" statement and associated PICS item) and the location seems not to be the most appropriate. In addition, the wording regarding to tx_gmii_enable of "connect" and "disconnect" the 64B/65B encoder of GMII transmit is not so clear. It is more appropriate to replace the wording with "control the operation" since the 64B/65B encoder can be considered always operative but the output depends on the value of the state variable.

Editor to modify definition in 115.3.5.1 as:

tx_gmii_enable

Variable set by the PHY TX control state diagram to control the operation of the 64B/65B encoder (see 115.2.4.1.2).

Values: TRUE: 64B/65B encoder maps the GMII transfers of the GMII transmit data stream into PDBs

FALSE: 64B/65B encoder does not encode GMII transmit data stream. Normal inter-frame is encoded in transmitted PDBs

Editor to delete: "it generates PDB.CTRL blocks encoding normal inter-frame (idle) information to fill the payload data sub-blocks (see 115.2.4.1.1) " from page 71, line 36.

Editor to replace page 71, line 35: "While establishing the bi-directional link, the 64B/65B PCS encoder is not connected to the GMII transmit stream (tx gmii enable <= FALSE), "

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

with

"While establishing the bi-directional link, the 64B/65B PCS encoder does not encode the GMII transmit stream (tx_gmii_enable <= FALSE)."

Editor to replace page 71, line 40:

"the 64B/65B PCS encoder is disconnected from the GMII transmit stream until the bidirectional link is re-established."

with

"the 64B/65B PCS encoder does not encode the GMII transmit stream until the bidirectional link is re-established."

Editor to insert in page 54, between lines 16 and 17: PCS_ENC_EN % tx_gmii_enable (see 115.3.5.1) value for each GMII transfer, 1xL vector

Editor to insert after "% 64B/65B encoding procedure" and before the for loop: GMII.TX_EN = GMII.TX_EN & PCS_ENC_EN; GMII.TX_ER = GMII.TX_ER & PCS_ENC_EN;

The two additions to the Matlab code are to include in the formal definition, which is subject of the shall statement, the behavior of the 64B/65B encoder when tx_gmii_enable is FALSE. As it can be seen in this case, all the GMII transfers that there may be from the MAC attached to the PHY are replaced by inter-frame (idles) before PDB mapping when tx_gmii_enable is FALSE.

C/ 115 SC 115.3.5.1 Page 3 of 7 11/3/2016 10:55:56 PM

| C/ 115 | SC 115 | 5.3.5.2 | P 70 | L 28 | # r01-17 | vector |
|---|---|---|---|--|---|--|
| Law, David | | | Hewlett Pa | ckard Enter | | Editor to insert after in page |
| Comment T | ype T | | Comment Status D | | La | te % When PCS_DEC_EN = (GMII.RX EN = GMII.RX E |
| | | | ble states that it is used | | | GMII.RX_EN = GMII.RX_E |
| | | | ve data stream'. I wa | | | |
| | | ent on tr | e GMII receive path wh | en rx_gmii_enable | =FALSE. | % Data reception error is si % in the middle of a packet |
| SuggestedR | • | hatahau | ld be ferwarded on the | CMII reasive noth | in this condition | idx_err = find(([diff(PCS_DE |
| | | nat shou | Id be forwarded on the | Givin receive patri | | GMII.RX_EN(idx_err) = 1; GMII.RX_ER(idx_err) = 1; |
| Proposed R | , | | Response Status W | | | |
| PROPO | ISED AC | CEPTIN | PRINCIPLE. | | | |
| This cor | nment is | solved w | ith the response to com | nment #r01-16, cop | ied below. | With the last additions to th for the case of rx_gmii_ena reception error indication w |
| decoder "control the outp used as | f of GMII the opera out depen | receive i ation" sin ds on the ation for f | rx_gmii_enable of "conr s not so clear. It is more ce the 64B/65B decode e value of the state varia he PCS 64B/65B decode n. | e appropriate to rep er can be considere able. In this way, th | ed always operative but ne Matlab code already | progress of a packet transfe |
| rx_gmii_ Variable decoder Values: into GM FALSE: | enable set by th (see 115 TRUE: 6 Il transfe 64B/65B | ne PHY F 5.2.5) 4B/65B of rs of GM decode | in 115.3.5.1 as: X control state diagram decoder receives PDBs Il receive data stream does not decode recei encoded into GMII rece | from the link partn ved PDBs from linl | er and decodes them | |
| "the 64E <= FALS with "the 64E receive | SE) until 1 3/65B PC | S decod the bidire S decod x_gmii_e | , line 23: er is disconnected from ectional link is re-establis er does not map PDBs i enable <= FALSE) until | shed (link_status = received from link | OK)." | |
| "The 64 MATLAI with "The 64 | B (see 1.3 | coder im 3) code5 coder im | plementation shall prod when the state variable plementation shall prod | e rx_gmii_enable is | TRUE (see 115.3.5.1). | u |
| | o insert in EC_EN | | , between lines 49 and mii_enable (see 115.3. | | | |

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 115 SC 115.3.5.2 Page 4 of 7 11/3/2016 10:55:56 PM

Editor to insert after in page 63, after line 4 (the last end of for loop) : % When PCS_DEC_EN = 0, idles are generated GMII.RX_EN = GMII.RX_EN & PCS_DEC_EN; GMII.RX_ER = GMII.RX_ER & PCS_DEC_EN;

% Data reception error is signaled when PCS_DEC_EN transitions to 0 % in the middle of a packet transfer dx_err = find(([diff(PCS_DEC_EN) < 0) 0] & GMII.RX_EN)+1; GMII.RX_EN(idx_err) = 1; GMII.RX_ER(idx_err) = 1;

With the last additions to the Matlab code, the behavior of 64B/65B decoder is defined also for the case of rx_gmii_enable = FALSE. The PCS decoder also generates a data reception error indication when rx_gmii_enable transitions from TRUE to FALSE during the progress of a packet transfer through the GMII.

| C/ 115 SC 115.3.5. | 2 P70 | L 52 | # r01-15 | | C/ 115 | SC 115.3.5. | 3 | P 71 | L 43 | # r01-16 | |
|---|--|---|---|---------------------|--|--|--|--|--|---|------------------------------|
| _aw, David | Hewlett Pack | ard Enter | | | Law, David | | F | lewlett Pack | ard Enter | | |
| Comment Type T | Comment Status D | | | Late | Comment Ty | /pe T | Comment St | atus D | | | Late |
| correctly, on reset (por arrow in to the TX_TE place (TX_EN=TRUE where it transmits idle | 's, if I read Figure 36-5 'PCS t wer_on=TRUE or mr_main_re ST_XMIT state. When reset is or TX_ER=TRUE), the state of (tx_o_set ? /l/). It remains in t rX_ER=FALSE) at which poir | eset=TRUE) they s removed, if a tra diagram transitior that state until the | transitions on an ansmission is takin ns in to the IDLE s e transmission cea | open ng state | loss of li which se to LPI, s to FAIL. state dia FALSE; | ink (signal_de ets code_sync ince sync_sta This will caus agram, part a' RX_ER ? TR | tectCHANGE=Tru s_status to FAIL (context tus = code_sync_ which includes the the context the context th | ie) will caus code_sync_s status + rx_ INK_FAILE e action 'IF i vector (SUD | e entry in to the l status <= FAIL. A lpi_active, sync_ D state in Figure receive = TRUE | diagram' correctly LOSS_OF_SYNC s ssuming this is no status will also be 36-7a 'PCS receiv THEN receiving ? R_K state is entere | state ot due set ve |
| on reset (pcs_reset = DISABLE DATA TRAN removed it will not exit Based on the above, b | E-T, in Figure 40-8 'PCS Data ON or link_status = FAIL) it tra NSMISSION state setting tx_e this state until both TX_EN = both 1000BASE-X and 1000B. EN or TE_ER is asserted, the | ansitions on an o enable to FALSE. FALSE and TX_ ASE-T PHYs ens | pen arrow in to the Even when reset ER = FALSE. sure that if they ex | e is it | Similarly 40-11a state R> (PUDI) a and RX_ | / for 1000BAS PCS Receive (_ER is asser at which point _DV (RX_ER | E-T when the link state diagram, pa ted (RX_ER ? TR the state diagram ? FALSE, RX_DV | status trans irt a' transitione UE) until the transitions ? FALSE) a | ons to the LINK F e next symbol ver to the IDLE state are set false. | status = FAIL) Fi AILED state. In th tor from the PMA where both RX_E sure that if they en | nis ER |
| SuggestedRemedy | | | | | | during reception | | packet is te | erminated with a | receive error being | ļ |
| Suggest that similar be | ehaviour if specified for 1000E | BASE-RH PHYs. | | | | | - | | | | |
| Proposed Response | Response Status W | | | | SuggestedR Suggest | - | ehaviour if specifi | ed for 1000 | BASE-RH PHYs | | |
| PROPOSED ACCEPT | IN PRINCIPLE. | | | | Proposed R | | Response Sta | | | | |
| Editor to define in 115 | .3.5.1 a new state variable as | | | | • | | T IN PRINCIPLE. | alus VV | | | |
| tx_gmii_idle Variable that indicates Values: TRUE: the val stream is 0 FALSE: the value of T Editor to modify the Pł | the idle status of the GMII tra ue of TX_EN signal of the cur X_EN signal of the current GN HY TX control state diagram s | ansmit data path. rrent GMII transfe MII transfer in GM so that the transiti | er in GMII transmit /II transmit stream ion from | n is 1 | The wor decoder "control the outp used as | ding regarding of GMII recei the operation ut depends or | g to rx_gmii_enab ve is not so clear. ' since the 64B/65 n the value of the for the PCS 64B/6 | It is more a B decoder o state variab | ppropriate to rep can be considere le. In this way, th | ect" the 64B/65B lace the wording w d always operative e Matlab code alre modifications need | e but eady |
| PMATX_ENABLE_TX | to PMATX_PCS_DATA is "lir | nk_status = OK * | tx_gmii_idle = TR | UE". | Editor to | modify dofini | tion in 115 2 5 1 c | | | | |
| | ion of PHY TX control state di led when there is no packet tr | | | nit | rx_gmii_ Variable | enable | | | o control the ope | ration of the 64B/6 | 55B |
| | I link is established (link_statu PDBs generated by the 64B/ | | | | Values: into GM FALSE: | TRUE: 64B/6 II transfers of 64B/65B dec | 5B decoder receiv GMII receive data | i stream ode receive | d PDBs from link | er and decodes the partner. Normal ir | |
| "Once the bidirectiona GMII transmit stream (transmit stream starts | I link is established and no pa link_status = OK * tx_gmii_id to be mapped into PDBs gen RUE in state PMATX_PCS_D | le = TRUE), data erated by the 64E | from the GMII | | "the 64E | | | | | tream (rx_gmii_en OK)." | able |

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 COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
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 115.3.5.3

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"the 64B/65B PCS decoder does not map PDBs received from link partner into the GMII receive stream (rx_gmii_enable <= FALSE) until the bidirectional link is re-established (link_status = OK). "

Editor to replace page 61, line 44:

"The 64B/65B decoder implementation shall produce the same result as the following MATLAB (see 1.3) code5 when the state variable rx_gmii_enable is TRUE (see 115.3.5.1). " with

"The 64B/65B decoder implementation shall produce the same result as the following MATLAB (see 1.3) code5."

Editor to insert in page 61, between lines 49 and 50: PCS_DEC_EN % rx_gmii_enable (see 115.3.5.1) value for each GMII transfer, 1xL vector

Editor to insert after in page 63, after line 4 (the last end of for loop) : % When PCS_DEC_EN = 0, idles are generated GMII.RX_EN = GMII.RX_EN & PCS_DEC_EN; GMII.RX_ER = GMII.RX_ER & PCS_DEC_EN;

% Data reception error is signaled when PCS_DEC_EN transitions to 0 % in the middle of a packet transfer idx_err = find(([diff(PCS_DEC_EN) < 0) 0] & GMII.RX_EN)+1; GMII.RX_EN(idx_err) = 1; GMII.RX_ER(idx_err) = 1;

With the last additions to the Matlab code, the behavior of 64B/65B decoder is defined also for the case of rx_gmii_enable = FALSE. The PCS decoder also generates a data reception error indication when rx_gmii_enable transitions from TRUE to FALSE during the progress of a packet transfer through the GMII.

| C/ 115 | SC 115.3.6.1 | P 77 | L 43 | # r01-9 |
|-------------|--------------|------------------|--------------|---------|
| Law, David | | Hewlett F | ackard Enter | |
| Comment Typ | pe T | Comment Status D | | Late |

The definition of the variable 'req_thp_coef' includes the statement that 'req_thp_coef is a set of 9 real numbers in fixed-point format (see 115.3.8) as received in the PHD field REMPHD.RX.REQ.THP.SETID.' Is this correct, the field PHD.RX.REQ.THP.SETID is a 2 bit field, see Table 115-6, and in the state THPTX_RECEIVE_REQ the variable req_thp_coef is assigned the value REMPHD.RX.REQ.THP.COEF which is a set of 9 real numbers.

SuggestedRemedy

Suggest that '... as received in the PHD field REMPHD.RX.REQ.THP.SETID.' should be changed to read '... as received in the PHD fields REMPHD.RX.REQ.THP.COEF.'.

Proposed Response Response Status W

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Clause, Subclause, page, line

C/ 115 SC 115.5.6 P89 L35 # r01-1 Perez De Aranda Alonso, Ruben Knowledge Developme Comment Status D Comment Type T The test mode 6 signal generated according to the equations specified in this subclause is not uncorrelated. Autocorrelation present peaks in some delay terms different to 0. Although not observed in experimental results, this thoretically may cause imprecissions in the estimations carried out for transmitter distortion measurement in 115.6.4.8. SuggestedRemedy - Change equations according to http://www.ieee802.org/3/bv/public/Nov 2016/perezaranda 3bv 1 1116.pdf. - Modify the PICS items TM15, TM16 and TM17 accordingly. - Modify the Matlab function tm6gen() in 115.6.4.8 according http://www.ieee802.org/3/bv/public/Nov 2016/perezaranda 3bv 1 1116.pdf. Proposed Response Response Status W PROPOSED ACCEPT. C/ 115 SC 115.5.6 P90 L17 # r01-2 Perez De Aranda Alonso, Ruben Knowledge Developme Comment Type **TR** Comment Status D The shall statement: "The transmitter shall time the transmit symbols sn from its local symbol clock." is not linked to any PICS item. SuggestedRemedy Add PICS item TM18: "Feature: Test mode 6 symbol clock reference. Subclause: 115.5.6 Value/Comment: sn sequence of PAM256 symbols timed with local symbol clock. Status: M" Proposed Response Response Status W PROPOSED ACCEPT

> C/ 115 SC 115.5.6

Page 6 of 7 11/3/2016 10:55:56 PM

| C/ 115 SC 115.6.3.1 P96 L22 | # r01-3 | C/ 115 | SC 115.6.3 | | 96 | L 47 | # r01-18 |
|---|---|-----------------------|--------------------|--|--------------|-----------------|-----------------|
| Perez De Aranda Alonso, Ruben Knowledge Developme | | Law, David | | | | rd Enter | |
| Comment Type TR Comment Status D Unique over-shoot limit is defined for falling-edge and for rising-edge based on the criterion of avoiding optical power clipping, so the limit ER. This limit is strictily valid for falling-edge overshoot. However, in general AlGaInP LEDs transients faster as higher is the to excite the quantum well/s. Therefore, the electrical-to-optical con instantaneosly faster for higher currents and slower for lower currer asymmetry between the rising and falling edges, being the measure the fall time. Because of that, and depending on the current driving LED architecture, the experimental results obtained in the laborator edge overshoot reaches higher values than falling-edge overshoot, rising-edge overshoot can overpass the specification of Table 115-4 Asymmetric dynamic response of the LED is accounted by the transmeasurement. Beside of that, rising-edge overshoot limit is needed desing to avoid saturation in any case of operation. SuggestedRemedy Modify current overshoot specification to become falling-edge overshoot. Min value of 20 %, according to http://www.ieee802.org/3/bv/public/Nov_2016/perezaranda_3bv_2_ | Law, David Hewlett Packard Enter Comment Type T Comment Status D Lat The PHY clock recovery function will derive a receive clock based on the received symbol stream, and hence the receive clock, and in particular its tolerance, will be based on the transmit clock of the far end PHY. I assume that this receive clock will be used to generate the GMII RX_CLK as I didn't see any mention of this being generated locally with a elasticity buffer deleting or adding idles to cross the clock boundary that would create. Based on this, since subclause 115.6.3.2 'Transmit clock frequency' states that the symbol transmission rate of the PHY shall be 325.00 MBd +/-0.025% the clock tolerance of the 1000BASE-RHx RX_CLK will also be +/-0.025%. The problem with this is that subclause 35.2.2.2 'RX_CLK (receive clock)' of IEEE Std 802.3-2015 states that 'When the received data rate at the PHY is within tolerance, the RX_CLK frequency shall be 125MHz +/-0.01%, one-eighth of the MAC receive data rate.'. It appears that a 1000BASE-RHx RX_CLK will not meet this requirement. Similarly to above, item fFREQ of Table 35-8 'AC specifications' of IEEE Std 802.3-2015 specifies a clock of 125MHz -100 ppm min, 125MHz +100 ppm max. Since subclause 115.6.3.2 specifies a transmit symbol clock. This will therefore require crossing of a clock boundary at some point yet I don't see the specification of a elasticity buffer deleting or adding idles to cross the boundary. | | | | | | |
| Eliminate "The transmitter overshoot (OS) is calculated as the maxi OSfall" from 115.6.4.6, pg. 100, line 50. | inium of OShse and | SuggestedF See cor | - | | | | |
| Proposed Response Response Status W | | Proposed R | esponse | Response Statu | s W | | |
| PROPOSED ACCEPT. | | | | T IN PRINCIPLE. | | | |
| | | Editor to accordi | | 25% with 0.01% in pa | ge 96 line 4 | 49. Modify PICS | 6 item PMI3 |
| | | Cl 115 Berger, Cat | SC 115.7 nerine | F |) | L | # r01-7 |
| | | magnitu | nce in 115.7 r | Comment Statu reads "The transfer fu d at DC (0 Hz) and is | Inction is s | | nit." Is "0 Hz" |
| | | SuggestedF | Remedy | | | | |
| | | Proposed R | esponse | Response Statu | s W | | |

PROPOSED ACCEPT IN PRINCIPLE. Eliminate "(0 Hz)", not really needed.

| TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general | C/ 115 | Page 7 of 7 |
|---|----------|-----------------------|
| COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn | SC 115.7 | 11/3/2016 10:55:56 PM |
| SORT ORDER: Clause, Subclause, page, line | | |