

IEEE P802.3df D3.1 1st Sponsor recirculation ballot comments

Cl 169 SC 169.1.2 P177 L41 # R1-1
 Brown, Matthew Alphawave
 Comment Type E Comment Status D (bucket)
 Figure 169-1 is relevant to any 800GBASE PHY, not just 800GBASE-R PHY types.
 SuggestedRemedy
 Under the medium block change "800GBASE-R" to "800GBASE".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 90A SC 90A.3 P251 L44 # R1-4
 Marris, Arthur Cadence Design Systems, Inc.
 Comment Type E Comment Status D (bucket)
 There is crossed out text "Annex_" that should not be there
 SuggestedRemedy
 Change "See Annex_90A.3" to "See 90A.3" on line 44.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 169 SC 169.4 P184 L13 # R1-2
 Brown, Matthew Alphawave
 Comment Type E Comment Status D (bucket)
 The units bit times and pause_quanta are defined twice in this subclause. First in the opening paragraph and again in the table footnotes.
 SuggestedRemedy
 Change: "Table 169-4 contains the values of maximum delay (sum of transmit and receive delays at one end of the link) for each instance of a sublayer in bit times (as specified in 1.4.215) and pause_quanta (as specified in 31B.2) for 800 Gigabit Ethernet."
 To: Change: "Table 169-4 contains the values of maximum delay (sum of transmit and receive delays at one end of the link) for each instance of a sublayer."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Implement the suggested remedy with editorial license.

Cl 173 SC 173.5.4 P244 L37 # R1-5
 Brown, Matthew Alphawave
 Comment Type E Comment Status D (bucket)
 Reference to "169.4 and its references" is unnecessarily verbose.
 SuggestedRemedy
 Change "169.4 and its references" to "169.4".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 169 SC 169.4 P184 L14 # R1-3
 Brown, Matthew Alphawave
 Comment Type E Comment Status D (bucket)
 For a description of bit times the paragraph points to the definition in 1.4.215 while the description of pause_quanta points to a reference in 31B.2, even though there is a definition for pause_quantum in 1.4.459 which refers to 31B.2.
 SuggestedRemedy
 Change the reference for pause_quanta description from 31B.2 to 1.4.459.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 31B SC 31B.4.6 P255 L50 # R1-12
 Marris, Arthur Cadence Design Systems, Inc.
 Comment Type T Comment Status D (bucket)
 Need to add PICS item TIM17 for 800 Gbps
 SuggestedRemedy
 Add new PICS item at end of 31B.4.6
 TIM17 Measurement point for station at 800 Gb/s 31B.3.7 Delay at MDI ≤ 1810 pause_quanta MIIp: M Yes
 Proposed Response Response Status W
 PROPOSED ACCEPT.

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Cl 171 SC 171.3.3 P195 L36 # R1-14
 Slavick, Jeff Broadcom Inc
 Comment Type T Comment Status D (bucket)
 The PHY 800GXS is the same as the 800GMII that is defined in Clause 170, so the wording is a bit odd. Follow the wording used in 172.1.5.1
 SuggestedRemedy
 Change "The service interface below the PHY 800GXS is defined as the 800GMII in Clause 170, with some exceptions and additional signals as follows:"
 to
 "The service interface below the PHY 800GXS is the 800GMII defined in Clause 170, with the following exceptions and additional signals:"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 173 SC 173.5.2.1 P242 L15 # R1-15
 Slavick, Jeff Broadcom Inc
 Comment Type T Comment Status D (bucket)
 In 173.4.1 we state that the Tx bit multiplexing function is restricted and Rx is unrestricted for the 32:8 PMA. In 173.5.2.1 we state the PMA provides bit-multiplexing for Tx and Rx and then repeat the transmit bit-multiplex is done over these lanes and then magically convert from general bit-multiplexing phrase to "restricted bit multiplexing".
 SuggestedRemedy
 In the second paragraph. Change "The restricted bit-level multiplexing function is identical"
 To: "This is a restricted bit-level multiplexing function that is identical"
 In the third paragraph. Change "The unrestricted bit-level multiplexing function is identical"
 To: "This is an unrestricted bit-level multiplexing function that is identical"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Implement suggested remedy with editorial license.
 [Editor's note: page was changed from 237 to 242]

Cl 173 SC 173.5.2.2 P242 L37 # R1-16
 Slavick, Jeff Broadcom Inc
 Comment Type T Comment Status D (bucket)
 In 173.4.2 we state that the Tx bit multiplexing function is unrestricted and Rx is restricted for the 8:32 PMA. In 173.5.2.2 we state the PMA provides bit-multiplexing for Tx and Rx and then repeat the transmit bit-multiplex is done over these lanes and then magically convert from general bit-multiplexing phrase to "unrestricted bit multiplexing".
 SuggestedRemedy
 In the second paragraph. Change "The unrestricted bit-level multiplexing function is identical"
 To: "This is an unrestricted bit-level multiplexing function that is identical"
 In the third paragraph. Change "The restricted bit-level multiplexing function is identical"
 To: "This is a restricted bit-level multiplexing function that is identical"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Implement suggested remedy with editorial license.
 [Editor's note: page was changed from 237 to 242]

Cl 173 SC 173.5.2.3 P243 L15 # R1-17
 Slavick, Jeff Broadcom Inc
 Comment Type T Comment Status D (bucket)
 In 173.4.3 we state that the Tx and Rx bit multiplexing function is restricted for the 8:8 PMA. In 173.5.2.3 we state the PMA provides bit-multiplexing for Tx and Rx and then state transmit bit-multiplex is done over these lanes and then magically convert from general bit-multiplexing phrase to "restricted bit multiplexing".
 SuggestedRemedy
 In the third paragraph. Change "The restricted bit-level multiplexing function is identical"
 To: "This is a restricted bit-level multiplexing function that is identical"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Implement suggested remedy with editorial license.
 [Editor's note: page was changed from 238 to 243]

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Cl 172A SC 172A P287 L24 # R1-18

Slavick, Jeff Broadcom Inc

Comment Type T Comment Status D (bucket)

Just before "the" 257-bit block was scrambled is not quite correct since it doesn't truly specify which of the 32 257-bit blocks in each flow the seeds applies to, but it is the first one

SuggestedRemedy

Change: "just before the 257-bit block was scrambled"
To: "prior to scrambling the first 257-bit block"

Proposed Response Response Status W

PROPOSED ACCEPT.

[Editor's note: page was changed from 282 to 287]

Cl 172A SC 172A P287 L30 # R1-19

Slavick, Jeff Broadcom Inc

Comment Type T Comment Status D (bucket)

The scrambling and mapping processes have produced a state of the tx_scrambled_am variable which are shown in the tables.

SuggestedRemedy

Change: "the variable tx_scrambled_am is produced as shown in "
To: "the state of the variable tx_scrambled_am is shown in"

Proposed Response Response Status W

PROPOSED ACCEPT.

[Editor's note: page was changed from 282 to 287]

Cl 172 SC 172.1.5.1 P211 L47 # R1-21

Ran, Adeo Cisco Systems, Inc.

Comment Type E Comment Status D (bucket)

"The PCS service interface is the 800GMII in Clause 170"
(twice, line 47 and line 50)

Similar references to xGMII clauses in the base document use the word "defined". For example see 149.3.1.

SuggestedRemedy

Change to "The PCS service interface is the 800GMII defined in Clause 170", twice.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Adding the word "defined" is a good change. However, It is not necessary to say "defined in Clause 170" twice in consecutive sentences.

Change the two sentences to the following :

"When the client sublayer is the Reconciliation Sublayer, the PCS service interface is the 800GMII defined in Clause 170.
When the client sublayer is the PHY 800GXS, the PCS service interface is the 800GMII with additional signals TXRD, TXLD, RXRD, RXLD and PCS_status."

Cl 172 SC 172.1.5.1 P212 L1 # R1-22

Ran, Adeo Cisco Systems, Inc.

Comment Type E Comment Status D (bucket)

"The TXRD and TXLD status signals indicate..."

These are not referred to as "status signals" elsewhere. The subsequent two paragraphs describe RXRD and RXLD without the word "status".

The last paragraph has "The PCS_status signal indicates..." but in this case "status" is part of the signal name - this adds confusion.

SuggestedRemedy

Change to "The TXRD and TXLD signals indicate..."

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 172 SC 172.2.4.6 P216 L38 # R1-23

Ran, Adee Cisco Systems, Inc.

Comment Type T Comment Status D (bucket)

"tx_am_sf<2:0> = {FEC_degraded_SER + rx_local_degraded,0,0}"

The "+" sign apparently means logical-or here, but it is used in two other places in this subclause and in Figure 172-3 with the meaning of numerical addition. It can also be interpreted as addition modulo 2 (XOR) as used in other contexts.

The text should be made unambiguous.

Also applies to 171.6.1, although there are no additional + signs there.

SuggestedRemedy

Add "and + denotes logical OR" after "where FEC_degraded_SER and rx_local_degraded are defined in 172.2.6.2.2".

Add a similar statement in 171.6.1, including references to the variable definitions in 172.2.6.2.2.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

In 172.2.6.2.2...

Change "where FEC_degraded_SER and rx_local_degraded are defined in 172.2.6.2.2" To "where FEC_degraded_SER and rx_local_degraded are defined in 172.2.6.2.2 and + denotes logical OR"

In 171.6.1, add the following statement:

"where FEC_degraded_SER and rx_local_degraded are defined in 172.2.6.2.2 and + denotes logical OR"

after tx_am_sf<2:0> = {FEC_degraded_SER + rx_local_degraded,0,0}

Implement with editorial license.

Cl 172 SC 172.2.5.2 P221 L12 # R1-24

Ran, Adee Cisco Systems, Inc.

Comment Type T Comment Status D (bucket)

"Within a flow, the data from the 16 PCS lanes is de-interleaved to reconstruct the original two streams of FEC codewords"

The similar statement in 119.2.5.2 is "the two FEC codewords are de-interleaved to reconstruct the original stream of two FEC codewords". And indeed this is a single stream of (pairs of) codewords, not two (independent) streams, that should be reconstructed.

The wording of 119.2.5.2 may be improved by changing "the original stream of two FEC codewords" to "the original stream of FEC codewords", or alternatively "of FEC codeword pairs" if the CRG prefers.

SuggestedRemedy

Change "Within a flow, the data from the 16 PCS lanes is de-interleaved to reconstruct the original two streams of FEC codewords"

to "Within a flow, the data from the 16 PCS lanes is de-interleaved to reconstruct the original stream of FEC codewords".

Proposed Response Response Status W

PROPOSED REJECT.

The text is accurate as written. The data is broken into two streams, one for each FEC decoder.

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Cl 173 SC 173.2 P237 L8 # R1-25

Ran, Adeo Cisco Systems, Inc.

Comment Type T Comment Status D (bucket)

"The 8:32 and 8:8 PMAs may optionally provide signal status information to the PMA client by disabling (squelching) one or more of the PAM4 symbol streams sent to the PMA client (PMA:IS_UNITDATA_0:7.indication), see 173.5.8.2 and 173.5.8.3

This sentence is technically inaccurate - it is the output lane (AUI transmitter) that is squelched, not the PAM4 symbol streams; a squelched transmitter does not correspond to any PAM4 symbol stream. Indeed, the text in 173.5.8.2 and 173.5.8.3 uses different wording.

It is also is not directly related to the subject of this subclause, PMA service interface. Since signal detect is defined in other subclauses, this level of detail is not necessary here.

Similarly for the 4th paragraph in 173.3.

SuggestedRemedy

In 173.2, change the quoted sentence to "The 8:32 and 8:8 PMAs may optionally provide signal status information to the PMA client as described in 173.5.8.2 and 173.5.8.3" and make it a separate paragraph.

In the 4th paragraph of 173.3, change "the 8:8 PMA may optionally provide signal status information by disabling (squelching) one or more of the PAM4 symbol streams sent to the sublayer below via PMA:IS_UNITDATA_0:7.request (see 173.5.8.3)" to "the 8:8 PMA may optionally provide signal status information to the sublayer below as described in 173.5.8.3".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

In Clause 173.2...

Change "The 8:32 and 8:8 PMAs may optionally provide signal status information to the PMA client by disabling (squelching) one or more of the PAM4 symbol streams sent to the PMA client (PMA:IS_UNITDATA_0:7.indication), see 173.5.8.2 and 173.5.8.3."

To "The 8:32 and 8:8 PMAs may optionally provide signal status information to the PMA client as described in 173.5.8.2 and 173.5.8.3"

And make this a new paragraph.

In Clause 173.3...

Change "For the 8:8 PMA, if the sublayer below the PMA is another PMA, the 8:8 PMA may optionally provide signal status information by disabling (squelching) one or more of the PAM4 symbol streams sent to the sublayer below via PMA:IS_UNITDATA_0:7.request (see 173.5.8.3)."

To "The 8:8 PMA may optionally provide signal status information to the sublayer below as described in 173.5.8.3"

Implement with editorial license.

Cl 172A SC 172A P282 L30 # R1-26

Ran, Adeo Cisco Systems, Inc.

Comment Type E Comment Status D (bucket)

"the variable tx_scrumbled_am is produced as shown in Table 172A-1 for flow 0 and Table 172A-4 for flow 1"

and then

"The expanded codewords are shown in Table 172A-2 and Table 172A-3 for flow 0, and in Table 172A-5 and Table 172A-6 for flow 1"

This annex would be easier to read and follow if the order of the tables was such that tables 172A-1 and 172A-4 appear first, right after the text that describes them, followed by the text that describes the remaining tables, and the remaining tables. All tables would be renumbered accordingly.

SuggestedRemedy

Re-order the tables and the text per the comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The suggested remedy makes the table numbering consistent with the description.

Implement the suggested remedy with editorial license.

Cl 171 SC 171.8 P202 L44 # R1-28

Dudek, Michael Marvell

Comment Type E Comment Status D (bucket)

Sentence without a verb

SuggestedRemedy

Change "described" to "are described"

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 116 SC 116 P L # R1-30
 Ran, Adee Cisco Systems, Inc.
 Comment Type T Comment Status D (bucket)
 The PHY type 400GBASE-DR4-2 introduced by this amendment is not listed in clause 116.
 The following seem to require updates:
 116.1.2 item h
 116.1.3: Table 116-2
 116.1.4: Table 116-5
 SuggestedRemedy
 Add Clause 116 into the amendment and add 400GBASE-DR4-2 in the locations listed in the comment, and elsewhere if required.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Clause 116 was in Draft 3.0 with the suggested amendments. However, Clause 116 was inadvertently deleted from the FrameMaker book for D3.1.
 Reinstate Clause 116 as it was in D3.0.

Cl 171 SC 171.6 P201 L21 # R1-34
 Dawe, Piers J G NVIDIA
 Comment Type T Comment Status D (bucket)
 The FEC degrade feature doesn't propagate FEC degrade conditions. It signals or reports them, and sometimes in the opposite direction, so the first "propagate" doesn't work. Is "all" telling us something (what?) or is it a rhetorical flourish? If the feature is present, it reports a lack of FEC degrade (nothing untoward detected) too.
 SuggestedRemedy
 Change the first sentence from "The FEC degrade feature provides the ability to detect degrade conditions at the RS-FEC decoder using FEC degrade detection and to propagate all detected FEC degrade conditions using FEC degrade signaling." to "The FEC degrade feature provides the ability to detect degrade conditions at the RS-FEC decoder using FEC degrade detection and to report FEC degrade conditions using FEC degrade signaling."
 If "all" is intentional, change it to "report all three possible types of FEC degrade condition". Same in 172.1.4.
 Proposed Response Response Status W
 PROPOSED REJECT.
 The word propagate here is referring to passing the detected FEC degrade condition through multiple sublayers.
 The text correctly describes the specified behavior and intent.

Cl 172 SC 172.1.3 P211 L18 # R1-35
 Dawe, Piers J G NVIDIA
 Comment Type T Comment Status D (bucket)
 MDIO is optional. So is any management, usually, although "it is recommended that an equivalent access is provided" (172.3).
 SuggestedRemedy
 Change "and informing" to "and, optionally, informing"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Implementing MDIO is optional. However, reporting the status to management is required.
 Change
 "Determining when a functional link has been established and informing the management entity via the MDIO when the PHY is ready for use"
 To:
 "Determining when a functional link has been established and informing the management entity when the PHY is ready for use"

Cl 172 SC 172.2.4.6 P216 L49 # R1-36
 Dawe, Piers J G NVIDIA
 Comment Type E Comment Status D (bucket)
 Font size
 SuggestedRemedy
 Fix
 Proposed Response Response Status W
 PROPOSED REJECT.
 The text formatting is correct as is using the paragraph format for a note, which is intentionally different from regular paragraph text, as provided in the 802.3 FrameMaker template.

Cl 172A SC 172A P287 L11 # R1-37
 Dawe, Piers J G NVIDIA
 Comment Type E Comment Status D (bucket)
 A more specific reference would make this annex easier to use
 SuggestedRemedy
 Change cross-reference from Clause 172 to 172.2.4
 Proposed Response Response Status W
 PROPOSED ACCEPT.

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Cl 172A SC 172A P282 L51 # R1-39

Dawe, Piers J G NVIDIA
 Comment Type TR Comment Status D (bucket)

Experience with Annex 172A shows us how valuable it is. But more complexity it follows: twice "Mux and 10-bit symbol distribution" as in 119.2.4.8 Figure 119-11 (with an order reversal that doesn't seem to be mentioned in the text), then 32:8 bit mux as in 173.5.2.1 where the two flows get interleaved, which is a new thing and worth an example.

SuggestedRemedy

Show some of the 16+16-lane output of the PCS for these cxA and cxB. It may be enough to show e.g. the beginnings of lanes 1 and 31, enough to include some differences between four codewords.

Also show some of the 8-lane output of an 32:8 bit mux from that (which could go in a NOTE in 173). Again, showing a couple of lanes would be enough to resolve most or all misinterpretations or ambiguities. Add a cross-reference from here.

If only a few hundred bits are needed, it could go in text. But if a more complete example is preferred, tables could be added and plain-text equivalents uploaded.

Proposed Response Response Status W

PROPOSED REJECT.

The example patterns are provided to help the implementer confirm correct interpretation of the encoding functionality which is complex. Whereas the 10-bit symbol multiplexing is easy to interpret correctly. Therefore adding the suggested additional patterns is not necessary.

Cl 171 SC 171.8 P202 L44 # R1-41

Dawe, Piers J G NVIDIA
 Comment Type E Comment Status D (bucket)

Missing verb

SuggestedRemedy

... are described

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Resolve using the response to comment R1-28.

Cl 169 SC 169.5 P187 L33 # R1-42

Dawe, Piers J G NVIDIA
 Comment Type T Comment Status D (bucket)

I suspect that the "N/A" here was copied from Table 116-9 and dates from a time when there were 26.5625 GBd (50G) AUIs but not 53.125 GBd AUIs. Now that there are, the missing numbers should be filled in.

SuggestedRemedy

Change the three N/A to approx 11, 202, 213. This should be done in Table 116-9 also, and a 53.125 GBd column should be added to Table 80-9 (both out of scope).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

In Table 169-6 in the UI column, change the three "N/A" to 11, 202, and 213 with each value preceded by the approximation symbol like other rows in this column.

Cl 169 SC 169.5 P187 L1 # R1-43

Dawe, Piers J G NVIDIA
 Comment Type E Comment Status D (bucket)

Empty lines

SuggestedRemedy

Removing the blank space at lines 1 and 25-26 should let the 169.6 FEC Degrade section fit on this page.

Proposed Response Response Status W

PROPOSED REJECT.

It is not necessary to retain an entire subclause on a single page. When the draft is prepared for production by the publication editors the entire draft will be updated as required. The proposed change does not improve the technical clarity or accuracy of the draft.

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Cl 171 SC 171.1 P196 L35 # R1-45

Dawe, Piers J G

NVIDIA

Comment Type ER Comment Status D (bucket)

Layout

SuggestedRemedy

Set Figure 171-1 to float and save a page.

Proposed Response Response Status W

PROPOSED REJECT.

It is not necessary to save space in an electronic document. When the draft is prepared for production by the publication editors the entire draft will be updated as required. The proposed change does not improve the technical clarity or accuracy of the draft.

Cl 173 SC 173.4.1 P239 L1 # R1-46

Dawe, Piers J G

NVIDIA

Comment Type ER Comment Status D (bucket)

Possibly, removing the blank line 1 and reducing the figure at lines 9-10...

SuggestedRemedy

would let it fit on the previous page with its subclause text.

Proposed Response Response Status W

PROPOSED REJECT.

It is not necessary to retain an entire subclause on a single page. When the draft is prepared for publication by the publication editors the entire draft will be updated as required. The suggested changed does not improve the technical accuracy or clarity of the draft.