

CI 178B SC 178B.8.2.1 P894 L7 # R1-1

Marris, Arthur Self

Comment Type TR Comment Status A Variables (CA)

"SQ" and "LP" are poor identifiers for mr_adj_los_mode enumerations as they could be interpreted as "square" and "link partner"

SuggestedRemedy

Rename "SQ" to "SQUELCH" and "LP" to "LOCAL_PATTERN" in 178B.8.2.1, Figure 178B010b, and Table 450133e.

Response Response Status W

ACCEPT IN PRINCIPLE.

Rename "SQ" to "SQUELCH" and "LP" to "LOCAL_PATTERN" in 178B.8.2.1, Figure 178B-10b, and Table 45-133e.

In 178B.8.2.1 in the definition of mr_adj_los_mode delete "(squelch)" and "(local pattern)".

Implement with editorial license.

CI 179 SC 179.8.9 P426 L31 # R1-2

Marris, Arthur Self

Comment Type TR Comment Status A (B) (E)

Comment 409 against draft 3.0 capitalized "local_pattern". This was the correct thing to do as tx_mode enumerated values are in upper case in the base standard.

SuggestedRemedy

In Clauses 179, 180, 181, 182, and 183 capitalize the enumerated values for tx_mode.

Also on page 432 change "(i.e., coef_req is 0Hold0)" to "(i.e., coef_req is 0HOLD0)"

Capitalize ic_req values in Table 17908 and Table 17909

Response Response Status W

ACCEPT.

[Editor's note: also applies to clauses 179, 180, 181, 182, 183]

CI 45 SC 45.2.1.272 P126 L # R1-3

Hajduczenia, Marek RG Nets

Comment Type E Comment Status A (B) (L)

D3.1 renamed Table 45-212u and its register-row descriptions/variables from generic "PMA test block error bin" to "PMA transmit test block error bin" (variable suffix _tx_), but the enclosing narrative was not updated. The subclause heading 45.2.1.272 ("PMA test block error bin counter registers"), the descriptive and intro sentences on p126, the ToC entry (p18), and the 45.8 register-address summary (p78) all still read generic "PMA test block". With a tx/rx register split present (rx registers 1.3308+ also map to 45.2.1.272), the lone "transmit"-titled table does not match its generic-named subclause and no parallel receive table is shown. In D3.0 (Table 45-212t, 45.2.1.271) everything was consistently generic.

SuggestedRemedy

Make naming consistent across the subclause: either (a) keep "PMA transmit" on the tx table, add a matching "PMA receive test block" table/text for the _rx_ registers, and update the 45.2.1.272 heading and intro to describe both directions; or (b) revert Table 45-212u title and row descriptions to generic "PMA test block". In either case align the heading (45.2.1.272), the p126 narrative, the ToC (p18), and the 45.8 summary row (p78).

Response Response Status C

ACCEPT IN PRINCIPLE.

In Table 45-3

Change "1.2900 through 1.3715 | PMA test block error bin counters | 45.2.1.272"

To: "1.2900 through 1.3307 | PMA transmit test block error bin counters | 45.2.1.272"

Insert new row below this in Table 45-3:

"1.3308 through 1.3715 | PMA receive test block error bin counters | 45.2.1.272"

In 45.2.1.272:

Create new "Table 450212v Lane 0 PMA receive test block error bin register definitions (for 4 of the 17 bins)" similar to "Table 450212u Lane 0 PMA transmit test block error bin register definitions (for 4 of the 17 bins)"

In this new table:

replace "transmit" with "receive" and "tx" with "rx"

offset the register numbers offset by 408. So for example "1.2900.15:0" becomes "1.3308.15:0"

Change the third paragraph of 45.2.1.272 from:

Table 450212u shows the assignment of bits for the lane 0 PMA test block error bin 0 to bin 3 registers in the transmit direction. Lane 0 error bin registers end at 1.2950 with test_block_error_bin_tx_0_16p upper. Lane 1 error bin registers start at 1.2951 with test_block_error_bin_tx_1_0 lower. The transmit direction error bin counter registers span from 1.2900 to 1.3307, the receive direction registers span from 1.3308 to 1.3715.

To:

Table 450212u shows the assignment of bits for the lane 0 PMA test block error bin 0 to bin 3 registers in the transmit direction. Lane 0 error bin registers end at 1.2950 with test_block_error_bin_tx_0_16p upper. Lane 1 error bin registers start at 1.2951 with test_block_error_bin_tx_1_0 lower. The transmit direction error bin counter registers span from 1.2900 to 1.3307. Table 450212v shows the assignment of bits for the lane 0 PMA test block error bin 0 to bin 3 registers in the receive direction. The receive direction registers span from 1.3308 to 1.3715.

IEEE P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comments

Implement with editorial licence.

[Editor's note: changed page from 18 to 126]

CI 120 SC 120 P203 L # R1-4

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (CG)

On D3.1 pages 203 and 204 the running header/footer carries the wrong project designation: header "IEEE Draft P802.3df/D3.1" and footer "IEEE P802.3df 400 Gb/s and 800 Gb/s Ethernet Task Force". Adjacent dj pages (200-202, 205-209) correctly read "IEEE Draft P802.3dj/D3.1" and "IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force". In D3.0 both pages were correct; the D3.1 date-update edit introduced the stale "df" designation.

SuggestedRemedy

Correct the page 203 and 204 header to "IEEE Draft P802.3dj/D3.1" and footer to "IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force" to match all adjacent pages.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 171 SC 171.6.1 P239 L # R1-5

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status R (B) (L)

The where-clause for tx_am_sf was botched in the D3.0->D3.1 edit - it seems that the "where" statement is missing and the newly inserted text should be part of the "tx_am_sf" variable definition, and not as a self standing text

SuggestedRemedy

Fix per comment + the same issue in 171.6.2

Response Response Status C

REJECT.

These changes were made in response to comments I-399 and I-400 against D3.0, to improve readability, as recorded in the following report: https://www.ieee802.org/3/dj/comments/D3p0/8023dj_D3p0_comments_final_clause.pdf. Adding "where" to the beginning of the sentence following the variable assignment is not necessary and does not improve the accuracy or clarity of the draft.

CI 177 SC 177.5.8 P370 L20 # R1-6

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (L)

Missing space in newly inserted sentence: "from the120-bit block multiplexer" -- "the" is run together with "120-bit". This text is new in D3.1 and appears in 177.5.8 Convolutional deinterleaver.

SuggestedRemedy

Change "from the120-bit block multiplexer" to "from the 120-bit block multiplexer".

Response Response Status C

ACCEPT.

CI 178 SC 178.10 P404 L46 # R1-7

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A AC coupling (B) (E)

In Table 178-13 (Channel characteristics summary), the "Maximum AC-coupling 3 dB corner frequency" row has a blank Reference cell. In D3.0 it cited 178.10.5. The D3.1 renumbering shifted AC-coupling to 178.10.4 and other rows were updated (e.g., SCMRCH 178.10.6->178.10.5), but this row's Reference was emptied rather than updated. Every other row carries a Reference. The blank also appears in the duplicate at p812.

SuggestedRemedy

Set the Reference cell of the "Maximum AC-coupling 3 dB corner frequency" row in Table 178-13 to 178.10.4 (also at the p812 duplicate).

Response Response Status C

ACCEPT IN PRINCIPLE.

In Annex 178C there is no specification of channel AC coupling. D3.0 used the same reference 178.10.4 although it is a different channel specification. Assuming the intent is to have the same requirements as in 178, a subclause should be added.

Add a new subclause 176C.7.5 "AC-coupling" with content "The channel AC-coupling specifications are identical to those of 178.10.4".

In Table 178-13,, use 178.10.4 for the reference cell of "Maximum AC-coupling 3 dB corner frequency".

In Table 176C-8, use 176C.7.5 for the reference cell of "Maximum AC-coupling 3 dB corner frequency".

Implement with editorial license.

[Editor's note: changed clause/subclause from 0/0 to 178/178.10]

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: Comment ID

Comment ID 7

Page 2 of 43

2026-07-14 5:58:37 AM

CI 178	SC 178.10.3.3	P409	L47	# R1-8
Hajduczenia, Marek		RG Nets		
Comment Type	E	Comment Status	A	Modal ERL (B) (E)
In the "where" list, RLcd(f) cites sCD11(f) as "defined in (176D.8.3)", but 176D.8.3 is the parent subclause "Return loss specifications". sCD11(f) is defined in the child subclause 176D.8.3.3 "Mixed-mode reflection coefficients". The parallel Clause 179 reference on p445 and sibling definitions (RLcc/RLdc, p437/p438) correctly cite 176D.8.3.3.				
SuggestedRemedy				
Change "(176D.8.3)" to "(176D.8.3.3)" to point to the precise defining subclause, matching the parallel Clause 179 reference on p445.				
Response	Response Status C			
ACCEPT.				

CI 179	SC 179.8.9	P426	L31	# R1-9
Hajduczenia, Marek		RG Nets		
Comment Type	T	Comment Status	A	(B) (CA)
The tx_mode enumerated values were renamed to uppercase (TRAINING, LOCAL_PATTERN, FILL, DATA) in the definition at 178B.8.3.1 (p899), but five PMD body-text references still use the old lowercase value: "tx_mode = local_pattern" on p426, p470, p509, p541, and p571. Additionally, the newly added FILL entry in the definition list (p899) lacks a terminating period ("FILL: transmit either training frames or LOCAL_PATTERN"), unlike the sibling TRAINING/LOCAL_PATTERN/DATA entries.				
SuggestedRemedy				
Update the five body-text references to "tx_mode = LOCAL_PATTERN" (p426, p470, p509, p541, p571) to match the renamed enumeration, and add a terminating period to the FILL definition on p899.				
Response	Response Status C			
ACCEPT IN PRINCIPLE.				
Add a period at the end of the tx_mode/FILL value definition in 178B.8.3.1.				
The capitalization is resolved by the response to comment R1-2.				
[Editor's note: also applies to annex 178B]				

CI 179	SC 179.9.4.8.2	P436	L35	# R1-10
Hajduczenia, Marek		RG Nets		
Comment Type	E	Comment Status	A	(B) (E)
Stray doubled closing parenthesis in the ERL substitution bullets. In 179.9.4.8.2 (p436): "the transmitter sDC22(f))." and in 179.11.3.2 (p448): "the channel sCD11(f))." each have only one opening paren, so the second ")" is stray. Adjacent bullets in the same lists correctly use a single paren (e.g., sCD11(f). / sCD22(f).). The defect also recurs at the parallel s-parameter bullets on p836 and p923.				
SuggestedRemedy				
Remove the extra closing parenthesis in each affected bullet (e.g., "sDC22(f)).", "sCD11(f).") on p436 and p448, and apply the same fix to the parallel occurrences on p836 and p923.				
Response	Response Status C			

remove the stray closing parenthesis in "(f))" in the following locations:
179.9.4.8.2
179.11.3.2
176D.8.3.2
178B.8.3.1
[Editor's note: also applies to clauses 179, 176D, 178B]

CI 180	SC 180.9.8.2	P489	L42	# R1-14
Hajduczenia, Marek		RG Nets		
Comment Type	ER	Comment Status	A	TFT editorial (B) (O)
In subclause 180.9.8.2 (Test functional symbol error histogram), the TFSEH is said to be "measured using a functional receiver as defined in 180.9.8.1 using the method defined in 180.9.8.2" -- the subclause references itself as its own measurement method. This self-reference was introduced by the D3.0->D3.1 renumbering (D3.0 referenced 180.9.9.1 and 180.9.9.2). The actual measurement method is 174A.9.3, as cited by the parent subclause 180.9.8.				
SuggestedRemedy				
Change "using the method defined in 180.9.8.2" to "using the method defined in 174A.9.3" to point to the actual measurement method (consistent with the parent 180.9.8).				
Response	Response Status W			
ACCEPT.				

CI 180 SC 180.9.15 P493 L45 # R1-16

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A SRS editorial (B) (O)

The newly inserted bullet reads "greater than 200MHz" with no space between value and unit, contrary to IEEE/SI style (the draft uses "4 MHz", "27 MHz" elsewhere). The same defect repeats in the parallel inserted bullets on p523, p555, and p587.

SuggestedRemedy

Change "greater than 200MHz." to "greater than 200 MHz." on p493, and apply the same fix to the identical bullets on p523, p555, and p587.

Response Response Status C

ACCEPT.

CI 181 SC 181.9.8 P521 L3 # R1-17

Hajduczenia, Marek

RG Nets

Comment Type ER Comment Status A editorial (B) (O)

The sentence "The transmitter functional symbol error histogram is measured using the method defined in 181.9.8" is a circular self-reference (181.9.8 is the subclause containing the sentence). In D3.0 the corresponding text referenced 180.9.9, and the parallel D3.1 clauses 182 and 183 correctly reference 180.9.8. The D3.0->D3.1 renumbering incorrectly applied the 181 prefix.

SuggestedRemedy

Change "measured using the method defined in 181.9.8" to "measured using the method defined in 180.9.8".

Response Response Status W

ACCEPT.

CI 182 SC 182.5.7 P540 L30 # R1-18

Hajduczenia, Marek

RG Nets

Comment Type T Comment Status A (B) (O)

The D3.1 rename PMD_global_transmit_disable -> Global_PMD_transmit_disable was applied to Clauses 179/180/181/185/187 and to the Clause 182/183 variable-mapping PICS tables (p558 Table 182-18, p589), but was missed in the Clause 182/183 body text and PICS detail rows, which still use the old name: 182.5.7 body (p540, two sentences), Clause 182 PICS item F13 (p561), 183.5.7 body (p570), and Clause 183 PICS item F14 (p592). The same variable is now named two ways within these clauses.

SuggestedRemedy

Change PMD_global_transmit_disable to Global_PMD_transmit_disable in the 182.5.7 body (p540), Clause 182 PICS F13 (p561), the 183.5.7 body (p570), and Clause 183 PICS F14 (p592), so all references match the renamed PICS table entries (p558, p589) and the other PMD clauses.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 182 SC 182.9.8 P552 L44 # R1-19

Hajduczenia, Marek

RG Nets

Comment Type ER Comment Status A (B) (O)

In 182.9.8 (p552) and 183.9.8 (p585) the renumbered cross-references are wrong: the text cites Equation (180-5) and Equation (180-6) for Tx_DUT_power_budget and Channel_insertion_loss, but in D3.1 those are the PAM4 threshold equations Pth2=Pave and Pth3 (p484-485), unrelated to the power budget. The power-budget quantities are defined by Equation (180-18) and Equation (180-19) (p488-489). The parallel Clause 181 functional-test text on p521 correctly cites (180-18)/(180-19). The D3.0 references (180-28)/(180-29)/(180-31) were mis-renumbered.

SuggestedRemedy

In 182.9.8 (p552) and 183.9.8 (p585), change "Equation (180-5)" to "Equation (180-18)" and "Equation (180-6)" to "Equation (180-19)", matching the power-budget definitions in 180.9.8.1 and the parallel Clause 181 text on p521.

Response Response Status W

ACCEPT.

CI 185 SC 185.3.1.4 P626 L9 # R1-20

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (O)

In the new subclause 185.3.1.4 "PMD:IS_SIGNAL.request(SIGNAL_OK)", the body text names the wrong primitive: "The PMD:IS_SIGNAL.indication primitive is generated by the 800GBASE-LR1 Inner FEC...". It should refer to the .request primitive, consistent with the heading and the 185.3.1.4.1 Semantics section. This is leftover copy from the .indication subclause (185.3.1.3).

SuggestedRemedy

Change "The PMD:IS_SIGNAL.indication primitive is generated..." to "The PMD:IS_SIGNAL.request primitive is generated by the 800GBASE-LR1 Inner FEC to indicate the status of the transmit function via the SIGNAL_OK parameter."

Response Response Status C

ACCEPT IN PRINCIPLE.
Implement the suggested remedy with editorial license.

CI 185 SC 185.5.6 P629 L16 # R1-21

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (O)

The sentence newly added to 185.5.6 PMD reset function, "PMD reset shall reset the ILT and RTS functions associated with the PMD (see 185.5.11)," terminates with a comma and is immediately followed by the next subclause heading (185.5.7), leaving an incomplete/dangling sentence. The same trailing-comma pattern recurs in the parallel clauses at p469/508/540/570 (180/181/182/183.5.12).

SuggestedRemedy

Replace the trailing comma with a period: "...associated with the PMD (see 185.5.11)."
Apply the same fix to the parallel clauses on p469, p508, p540, and p570.

Response Response Status C

ACCEPT IN PRINCIPLE.
In 180.5.6, 181.5.6, 182.5.6, 183.5.6 and 185.5.6 change:
"PMD reset shall reset the ILT and RTS functions associated with the PMD (see 18x.5.12)," to
"PMD reset shall reset the ILT and RTS functions associated with the PMD (see 18x.5.12)."
With editorial license.

CI 185 SC 185.5.11 P629 L49 # R1-22

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (O)

New subclause heading 185.5.11 reads "Autonomous path startup functions (APSU) functions" with "functions" duplicated. All parallel clauses (178.8.9, 179.8.9, 180.5.12, 181.5.12, 182.5.12, 183.5.12, 187.5.11) use "Autonomous path startup (APSU) functions".

SuggestedRemedy

Change heading 185.5.11 (and its ToC entry on p40) to "Autonomous path startup (APSU) functions".

Response Response Status C

ACCEPT.

CI 186 SC 186.1.3.4 P651 L15 # R1-23

Hajduczenia, Marek

RG Nets

Comment Type ER Comment Status A (B) (L)

Two unresolved "(XREF)" cross-reference placeholders shipped in new D3.1 text on p651: one in the sentence mapping FEC:IS_SIGNAL.request to the MNT bits (before Table 186-1) and one in the sentence about the SIL function reading the received MNT bits (before Table 186-2).

SuggestedRemedy

Replace each "(XREF)" with the correct cross-reference to the subclause that defines the MNT field/bits.

Response Response Status W

ACCEPT IN PRINCIPLE.
Resolved using the response to comment R1-138 and using the response to comment R1-139

CI 186 SC 186.2.2 P652 L1 # R1-24

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (L)

In new D3.1 text on p652, the primitive name is written "FEC:IS_SIGNALindication(SIGNAL_OK)", missing the period between SIGNAL and indication. The correct primitive name (used 165 times elsewhere in D3.1) is FEC:IS_SIGNAL.indication.

SuggestedRemedy

Change "FEC:IS_SIGNALindication(SIGNAL_OK)" to "FEC:IS_SIGNAL.indication(SIGNAL_OK)".

Response Response Status C

ACCEPT IN PRINCIPLE.
[Editor's note: changed subclause to 186.2.2]
Implement the suggested remedy.

CI 186 SC 186.6.1 P690 L21 # R1-25

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (L)

PHY name typo in the rewritten path-delay paragraph: "800BASE-ER1 FEC sublayer" is missing the 'G'; the correct name "800GBASE-ER1" is used consistently elsewhere in the same paragraph on p690.

SuggestedRemedy

Change "800BASE-ER1 FEC sublayer" to "800GBASE-ER1 FEC sublayer".

Response Response Status C

ACCEPT.

CI 0 SC 0 P693 L26 # R1-26

Hajduczenia, Marek

RG Nets

Comment Type TR Comment Status A (B) (L)

The newly added IFEC_hi_ser row in Table 186-10 has an empty Variable reference (subclause) cell, unlike all adjacent rows which cite 186.2.3.1.3 or 186.2.3.5.2. The variable IFEC_hi_ser is not defined or referenced anywhere in Clause 186. A new Editor's note on the same page acknowledges this gap (added per comment I-11, no reference in clause). This unresolved open item/placeholder should not remain in a recirculation draft.

SuggestedRemedy

Resolve before publication: either add a Clause 186 definition/usage of IFEC_hi_ser and populate its subclause reference in Table 186-10, or remove the IFEC_hi_ser row; then delete the Editor's note.

Response Response Status W

ACCEPT IN PRINCIPLE.
Clause 186.2.3.1.3 points back to 172.2.5.3, which explains that hi_ser for each flow are mapped to separate variables that are later ORed into a hi_ser_combined variable and mapped to the MDIO register. All the other IFEC-related variables refer to 186.2.3.1.3, so that can be done with this one also.
Update Table 186-10 to indicate 186.2.3.1.3 as the reference for IFEC_hi_ser.
[Editors note: changed clause/subclause from 0/0 to 186/186.7.2]

CI 176C SC 176C.6.4.5.2 P810 L38 # R1-27

Hajduczenia, Marek

RG Nets

Comment Type T Comment Status A RX test calibration (B) (E)

The jitter-adjustment sentence was changed from "Table 176C-2 for package A" (D3.0) to "Table 176C-2 for package class A" (D3.1). The qualifier does not resolve: Table 176C-2 (p803) lists single JH4u/JHRMS limits (0.118/0.023 UI) with no class A/class B differentiation, so "for package class A" references a per-class entry that does not exist in that table.

SuggestedRemedy

Change "as close as practical to their limits in Table 176C-2 for package class A" to "as close as practical to their limits in Table 176C-2", dropping the per-class qualifier that has no corresponding distinction in Table 176C-2.

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-212.

CI 176D SC 176D.8.3.4 P836 L45 # R1-28

Hajduczenia, Marek

RG Nets

Comment Type TR Comment Status A (B) (E)

The new body text of 176D.8.3.4 cites the wrong RL mask equations, off by one. It says common-mode-to-common-mode is satisfied by Equation (179-15) and common-mode-to-differential-mode by Equation (179-16). However Equation (179-14) is RLcc and Equation (179-15) is RLdc; Equation (179-16) is not the mask used here. Table 176D-9 (p837) and the parallel Clause 179 text (p436) both correctly pair ERLCC with Equation (179-14) and ERLDC with Equation (179-15), so the body contradicts its own table.

SuggestedRemedy

In the 176D.8.3.4 body, change "Equation (179-15)" to "Equation (179-14)" for the ERLCC sentence, and "Equation (179-16)" to "Equation (179-15)" for the ERLDC sentence, to match Table 176D-9 and the parallel Clause 179 text.

Response Response Status W

ACCEPT.

CI 178B SC 178B.7.8.4 P891 L26 # R1-29

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (CA)

In Figure 178B-12, two coef_sts assignments read "COEFFICIENT AT LIMIT AND QUALIZATION LIMIT" (missing leading E in EQUALIZATION). This does not match the enumerated value defined in 178B.9 (p897): "COEFFICIENT AT LIMIT AND EQUALIZATION LIMIT". The correct spelling renders fine elsewhere on the same page (e.g., "NO EQUALIZATION").

SuggestedRemedy

In both occurrences on p891, change "QUALIZATION" to "EQUALIZATION" so each assignment reads "coef_sts = COEFFICIENT AT LIMIT AND EQUALIZATION LIMIT".

Response Response Status C

ACCEPT.

CI 178B SC 178B.8.3.3 P902 L10 # R1-30

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (CA)

The state box in Figure 178B-10b is labeled "WAIT_DATAPATH", a misspelling of "WAIT_DATAPATH". This is a newly added state in the D3.1 state-diagram rework; the correct spelling appears nowhere in D3.1, so the state name is unresolvable/inconsistent.

SuggestedRemedy

Change the state name in Figure 178B-10b from "WAIT_DATAPATH" to "WAIT_DATAPATH".

Response Response Status C

ACCEPT.

[Editor's note: Changed clause/subclause from 0/0 to 178B/178B.8.3.3]

CI 179D SC 179D.1.1 P941 L34 # R1-32

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (E)

In the newly added clause referencing Table 179D-5, the PMD type is misspelled "1.6TBAESE-CR8" (letters transposed) instead of "1.6TBASE-CR8". The correct spelling appears elsewhere on the same page.

SuggestedRemedy

Change "Table 179D-5 for 1.6TBAESE-CR8" to "Table 179D-5 for 1.6TBASE-CR8".

Response Response Status C

ACCEPT.

CI 180A SC 180A.4 P947 L18 # R1-33

Hajduczenia, Marek

RG Nets

Comment Type E Comment Status A (B) (O)

Two defects in rewritten D3.1 text. (1) Misplaced closing parenthesis in the 2-lane PMD sentence: "(400GBASE-DR2 or 400GBASE-DR2-2 is implemented with this optical connector)," should close after the PMD list, as in the three sibling paragraphs on the same page and the parallel paragraph on p945. (2) Grammar error: "When an single 8-lane PMD (1.6TBASE-DR8 or 1.6TBASE-DR8-2)..." should use "a".

SuggestedRemedy

(1) Move the closing parenthesis: "... (400GBASE-DR2 or 400GBASE-DR2-2) is implemented with this optical connector, ...". (2) Change "When an single 8-lane PMD" to "When a single 8-lane PMD".

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement suggested remedy with editorial license. Scrub the subclause for any additional incorrect uses of "an".

CI 186A SC 186A.3 P963 L25 # R1-34
Hajduczenia, Marek RG Nets
Comment Type E Comment Status A (B) (L)
Missing word "in" in newly inserted test-vector sentence: "for the 800GBASE-ER1 FEC sublayer as shown Figure 186A-1." The parallel VP4 sentence on p966 correctly reads "as shown in Figure 186A-2."
SuggestedRemedy
Change "as shown Figure 186A-1" to "as shown in Figure 186A-1".
Response Response Status C
ACCEPT.

CI 184 SC 184.12.4.3 P620 L12 # R1-35
Bruckman, Leon NVIDIA
Comment Type TR Comment Status A (B) (L)
Sec. 184.12.4.3 and Sec. 184.12.4.6 are both sub-sections titled 'Management' under Sec. 184.12.4, each independently defining items M1 and M2 with the same feature names and the same Sec. 184.11 reference. The duplicate sections make the PICS proforma ambiguous -- a reader cannot determine which Status values are normative. The M1 Status values differ between the two sections ('O' vs 'MD:M'), and the M2 Value/Comment is present in one but absent in the other.
SuggestedRemedy
Remove Sec. 184.12.4.3 (p. 619, lines 12-20). Retain Sec. 184.12.4.6 (p. 620) as the sole Management sub-section, correcting its M2 Value/Comment field and renaming it Sec. 184.12.4.3 to restore sequential numbering.
Add 'Table 184-6 and Table 184-7' to the Value/Comment field of M2 in Sec. 184.12.4.6.
Response Response Status W
ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
However the change proposed in the suggested remedy is an improvement to the draft.
Implement the suggested remedy with editorial license.

CI 184 SC 184.12.4.2 P619 L37 # R1-36
Bruckman, Leon NVIDIA
Comment Type TR Comment Status A (B) (L)
Sec. 184.6.1 (Receive signal sampling) contains a normative 'shall': 'Each Rx_XI, Rx_XQ, Rx_YI, and Rx_YQ signal shall be sampled at a sampling rate equal to or greater than the 800GBASE-LR1 signaling rate' (p. 607, line 43). The Receive Function PICS table (Sec. 184.12.4.2) starts at RF1 for Sec. 184.6.2, skipping Sec. 184.6.1 entirely. This 'shall' requirement is not represented by any PICS conformance item.
SuggestedRemedy
Add a new PICS entry (e.g., RF0) to Sec. 184.12.4.2 for Sec. 184.6.1 'Receive signal sampling,' Status M, confirming that the ADC sampling rate meets the minimum 800GBASE-LR1 signaling rate requirement.

Response Response Status W
ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
However the change proposed in the suggested remedy is an improvement to the draft.
Implement the suggested remedy with editorial license.

CI 178B SC 178B.11 P909 L25 # R1-37
Bruckman, Leon NVIDIA
Comment Type TR Comment Status A (B) (CA)
Sec. 178B.9 (Training retimers) contains a normative 'shall': 'The local clock shall meet the signaling rate range specified for the interface' (p. 904, line 4). There is no corresponding PICS entry in the Annex 178B PICS proforma.
SuggestedRemedy
Add a new PICS entry (e.g., RT1) in Sec. 178B.11 for Sec. 178B.9, Status M, confirming the local clock signaling rate requirement.
Response Response Status W
ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.
Implement the suggested remedy with editorial license.

CI 178B SC 178B.11.4 P909 L47 # R1-38

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (CA)

Sec. 178B.10 states 'If the MDIO interface is not implemented, an alternate mechanism to access management variables shall be provided' (p. 905, line 37). The Sec. 178B.11.4 Management PICS table has only M1 for MDIO mapping (MD:M) with no entry for alternate access. Sec. 184.12 addresses this correctly with a dedicated '!MD:M' item; Annex 178B has no equivalent.

SuggestedRemedy

Add a new PICS item M2 to Sec. 178B.11.4 with Status '!MD:M', 'Alternate access to management variables when MDIO not implemented,' referencing Sec. 178B.10.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.

Implement the suggested remedy with editorial license.

CI 174 SC 174.1.4 P275 L35 # R1-39

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (CG)

Tables cited in reversed order. The text reads 'Table 174-3 and Table 174-2 specify the correlation between PHY types and clauses.' Per standard document convention, tables are cited in ascending numerical order. Table 174-2 (electrical PHY types) appears first in the document, followed by Table 174-3 (optical PHY types).

SuggestedRemedy

Change 'Table 174-3 and Table 174-2' to 'Table 174-2 and Table 174-3'.

Response Response Status C

ACCEPT.

CI 174 SC 174.2.5 P277 L37 # R1-40

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (CG)

Wrong annex reference for the 1.6TAUI-16 C2M. The text states 'The 1.6TAUI-16 C2M is specified in Annex 176D,' but Annex 176D covers 200GAUI-1 C2M, 400GAUI-2 C2M, 800GAUI-4 C2M, and 1.6TAUI-8 C2M -- the 8-lane variant, not the 16-lane. The immediately following line (line 41) also references Annex 176D for 1.6TAUI-8 C2M (correct), making the duplication obvious. The 1.6TAUI-16 C2M is consistently referenced as Annex 120G throughout the document (TOC, line 3649, lines 17530, 33782, 38873).

SuggestedRemedy

Change 'The 1.6TAUI-16 C2M is specified in Annex 176D.' to 'The 1.6TAUI-16 C2M is specified in Annex 120G.'

Response Response Status W

ACCEPT.

CI 174 SC 174.4 P283 L35 # R1-41

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (CG)

Table 174-4 AUI row: Name '1.6TAUI-4 C2C or C2M' -- the interface 1.6TAUI-4 does not exist; the standard defines 1.6TAUI-8 and 1.6TAUI-16.

SuggestedRemedy

Replace the row with: Sublayer='1.6TAUI-8 C2C or C2M component', bit times=73 728, pause_quanta=144, ns=46.08. Notes column unchanged.

Response Response Status W

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 174 SC 174.5 P287 L28 # R1-42

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A skew (B) (CG)

Table 174-6 footnote e states '1 UI equals 8.31543 ps at PMD lane signaling rate of 113.4375 Gb/s.' The correct value is 8.81543 ps (1 / 113.4375e9 = 8.81543e-12 s). The table body confirms the error: SP3=68 UI and SP4=386 UI are consistent only with 8.81543 ps (0.6 ns / 8.81543 ps = 68.1; 3.4 ns / 8.81543 ps = 385.7), not with 8.31543 ps (which gives 72 and 409). The same '8.31543' typo appears in Table 116-6 (doc line 13668) and Table 169-6 (doc line 16352).

SuggestedRemedy

In Table 174-6 footnote e, change '8.31543 ps' to '8.81543 ps'. Apply the same correction to the identical footnote in Table 116-6 and Table 169-6.

Response Response Status W

ACCEPT IN PRINCIPLE.

In Table 174-6 footnote e, change '8.31543 ps' to '8.81543 ps'.

Apply the same correction in Table 116-9 and Table 169-6.

Implement with editorial license.

CI 171 SC 171.2 P232 L29 # R1-43

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (L)

Nomenclature error: the text refers to 'DTE 1.6XS' (missing the letter 'T'). The correct standardized sublayer name is 'DTE 1.6TXS' throughout all other uses in this clause and document.

SuggestedRemedy

Change 'DTE 1.6XS' to 'DTE 1.6TXS'.

Response Response Status W

ACCEPT IN PRINCIPLE.

Implement the suggested remedy where applicable throughout the draft. This includes Figure 171-3a.

CI 171 SC 171.7 P241 L26 # R1-44

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (L)

Incorrect figure insertion instruction: the amendment text says 'Insert new Figure 171-3a after Figure 173-3' but Figure 171-3a logically belongs in Clause 171 and should be inserted after Figure 171-3, not after Figure 173-3 (which is in Clause 173, page 273).

SuggestedRemedy

Change 'Insert new Figure 171-3a after Figure 173-3' to 'Insert new Figure 171-3a after Figure 171-3'.

Response Response Status W

ACCEPT.

CI 176 SC 176.6 P342 L1 # R1-45

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (L)

Section heading '176.6' reads: '200GBASE-R 1:1, 400GBASE-R 2:2, 800GBASE-R 4:4, 1.6TBASE-R 8:8, 1.6TBASE 16:16 PMAs'. The last entry is '1.6TBASE 16:16 PMAs' -- the 'R' suffix is missing from the PHY type name. All other uses in the document correctly use '1.6TBASE-R 16:16 PMA' (e.g., Table 176-3 footnote a, Table 176-4 heading).

SuggestedRemedy

Change '1.6TBASE 16:16 PMAs' to '1.6TBASE-R 16:16 PMAs' in the section heading.

Response Response Status W

ACCEPT.

Cl 176 SC 176.6 P343 L36 # R1-46
 Bruckman, Leon NVIDIA
Comment Type TR Comment Status A (B) (L)
 Figure 176-13 legend reads 'n = 1 (200GBASE-R), 2 (400GBASE-R), 4 (800GBASE-R), or 8 (1.6TBASE-R)'. This omits n = 16 for the 1.6TBASE-R 16:16 PMA, even though the figure caption and section heading explicitly include the 16:16 PMA.
SuggestedRemedy
 Change the legend to: 'n = 1 (200GBASE-R), 2 (400GBASE-R), 4 (800GBASE-R), 8 (1.6TBASE-R 8:8 PMA), or 16 (1.6TBASE-R 16:16 PMA)'.
Response Response Status W
 ACCEPT IN PRINCIPLE.
 Figure 176-13 applies to the 1:1, 2:2, 4:4, 8:8 and 16:16 PMAs as noted in the Figure title. In the legend at the bottom of the figure, the value for the variable n is defined for each type of PMA except the 16:16. The value of n for the 16:16 PMA needs to be added to this legend.
 Change the text in the legend of Figure 176-13 from:
 "n = 1 (200GBASE-R), 2 (400GBASE-R), 4 (800GBASE-R), or 8 (1.6TBASE-R)"
 to:
 "n = 1 (200GBASE-R 1:1 PMA), 2 (400GBASE-R 2:2 PMA), 4 (800GBASE-R 4:4 PMA), 8 (1.6TBASE-R 8:8 PMA), or 16 (1.6TBASE-R 16:16 PMA)"
 Implement with editorial licence.

Cl 177 SC 177.7.3 P374 L7 # R1-47
 Bruckman, Leon NVIDIA
Comment Type TR Comment Status A (B) (L)
 Normative 'shall' statement references the wrong state diagram figure. The text reads: 'An Inner FEC Pad detection process as illustrated in the state diagram in Figure 177-13 shall be implemented...' Figure 177-13 is the Inner FEC self-synchronization state diagram. The pad detection state diagram is Figure 177-14. Implementations following this text literally would implement a second instance of the sync state diagram instead of the pad-lock process.
SuggestedRemedy
 Replace 'Figure 177-13' with 'Figure 177-14' in the second sentence of 177.7.3.
Response Response Status W
 ACCEPT.

Cl 178 SC 178.1 P387 L47 # R1-48
 Bruckman, Leon NVIDIA
Comment Type TR Comment Status A (B) (E)
 Table 178-4 (Relationship between clauses and PHY types defined in Clause 178) lists the associated PCS clause for 1.6TBASE-KR8 as '172--1.6TBASE-R PCS'. Clause 172 is the 800GBASE-R PCS, not the 1.6TBASE-R PCS. The 1.6TBASE-R PCS is Clause 175. This is contradicted by 178.3 in the same clause, which correctly states 'the Clause 175 PCS for 1.6TBASE-KR8'. The 800GBASE-KR4 row in the same table correctly shows '172'.
SuggestedRemedy
 Change '172--1.6TBASE-R PCS' to '175--1.6TBASE-R PCS' in Table 178-4.
Response Response Status W
 ACCEPT IN PRINCIPLE.
 This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
 However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 177 SC 177.11.4.1 P383 L13 # R1-49

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (L)

PICS table 177.11.4.1 (Transmit function) is missing entries for several mandatory functions. Sec. 177.4.1 states alignment marker lock 'is required for 200GBASE-R, 400GBASE-R, 800GBASE-R, and 1.6TBASE-R Inner FEC' (normative requirement). Sec. 177.6.1.2 states 'The Inner FEC shall include a PRBS31 test-pattern generator'; Sec. 177.6.1.5 uses 'shall' for the SSPRQ generator; Sec. 177.6.2.1 uses 'shall' for the PRBS31 checker; Sec. 177.6.1.1 and 177.6.2.3 contain additional 'shall' requirements for PRBS31-encoded-by-Inner-FEC modes. None of these mandatory items appear in the PICS proforma. Additionally, PICS item TF5 is labelled '8:1 PAM4 interleaving' but Sec. 177.4.6 is titled '8:1 bit-pair interleaving' -- these should match.

SuggestedRemedy

Add PICS items for: symbol demultiplexing/deskew (177.4.1, M); PRBS31 test-pattern generator (177.6.1.2, M); SSPRQ generator (177.6.1.5, M); PRBS31 checker (177.6.2.1, M); PRBS31-encoded-by-Inner-FEC TX mode (177.6.1.1, M); PRBS31-encoded-by-Inner-FEC RX mode (177.6.2.3, M). Also rename TF5 feature from '8:1 PAM4 interleaving' to '8:1 bit-pair interleaving' to match Sec. 177.4.6.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft.

In 177.11.4.1 Transmit function:

Rename '8:1 PAM4 interleaving' to '8:1 bit-pair interleaving' for TF5.

Shift numbers for TF1-TF6 by +1 to TF2-TF7.

Insert a new line at the top of the table:

TF1, Symbol demultiplexing/deskew, 177.4.1, , M;

Insert new lines at the bottom of the table:

TF8, PRBS31-encoded-by-Inner-FEC TX mode (177.6.1.1, M);

TF9, PRBS31 test-pattern generator, 177.6.1.2, , M;

TF10, SSPRQ generator, 177.6.1.5, , M;

TF11, PRBS31 checker, 177.6.2.1, , M;

In 177.11.4.2 Receive function

Insert a new line at the bottom of the table:

RF7, PRBS31-encoded-by-Inner-FEC RX mode, 177.6.2.3, , M.

Implement with editorial license.

CI 179 SC 179.1 P419 L17 # R1-50

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (E)

Table 179-4 (Relationship between clauses and PHY types defined in Clause 179) lists the associated PCS clause for 1.6TBASE-CR8 as '172--1.6TBASE-R PCS'. Clause 172 is the 800GBASE-R PCS. The 1.6TBASE-R PCS is Clause 175. This is contradicted by 179.3, which correctly states 'the Clause 175 PCS for 1.6TBASE-CR8'. The 800GBASE-CR4 row in the same table correctly shows '172'.

SuggestedRemedy

Change '172--1.6TBASE-R PCS' to '175--1.6TBASE-R PCS' in Table 179-4.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft.

Implement the suggested remedy.

CI 178 SC 178.6 P390 L14 # R1-51

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A delay (B) (E)

Table 178-5 (delay constraints) footnote b states '256 ps for 1.6TBASE-KR8' as the pause_quantum value. For 1.6TBASE, 1 pause_quantum = 512 bit times x 0.625 ps/bit = 320 ps, per Clause 174 Table 174-4 footnote c which explicitly states '320 ps' for 1.6TBASE. The value 256 ps corresponds to a hypothetical 2 Tb/s system and is clearly a transcription error. Verification: Table 178-4 lists 232 pause_quanta for 118,784 bit times (118,784 / 512 = 232, correct), but 232 x 256 ps = 59.4 ns not 74.24 ns; only 232 x 320 ps = 74.24 ns is consistent with the ns column.

SuggestedRemedy

In footnote b of Table 178-5, change '256 ps for 1.6TBASE-KR8' to '320 ps for 1.6TBASE-KR8'.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft.

Implement the suggested remedy.

CI 179 SC 179.6 P422 L14 # R1-52

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A delay (B) (E)

Table 179-5 (delay constraints) footnote b states '256 ps for 1.6TBASE-CR8' as the pause_quantum value. For 1.6TBASE, 1 pause_quantum = 320 ps (512 x 0.625 ps), per Clause 174 Table 174-4 footnote c. The value 256 ps is wrong: 232 x 256 ps = 59.4 ns, not 74.24 ns as shown in the table's ns column; 232 x 320 ps = 74.24 ns is consistent. The same '256 ps' error occurs in Table 178-4 footnote b (p. 389, line 14) for 1.6TBASE-KR8.

SuggestedRemedy

In footnote b of Table 179-5, change '256 ps for 1.6TBASE-CR8' to '320 ps for 1.6TBASE-CR8'.

Response

Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 169 SC 169.4 P216 L1 # R1-53

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A delay (B) (CG)

Table 169-4 lists 96 pause_quanta for all seven 800GBASE 4-lane PMD rows: 800GBASE-KR4, 800GBASE-CR4, 800GBASE-DR4, 800GBASE-FR4-500, 800GBASE-DR4-2, 800GBASE-FR4, and 800GBASE-LR4. The correct value is 116 pause_quanta: these rows all have 59,392 bit times and 74.24 ns. Verification: 59,392 / 512 = 116; 116 x 640 ps = 74.24 ns (640 ps = 1 pause_quantum at 800 Gb/s). With 96 pause_quanta: 96 x 640 ps = 61.44 ns, inconsistent with 74.24 ns. The individual PMD clause delay tables (178.6, 179.6, 180.4.1, 181.4.1, 182.4.1) all correctly state 116 pause_quanta for the same entries.

SuggestedRemedy

In Table 169-4, change 96 pause_quanta to 116 pause_quanta for all seven 800GBASE 4-lane PMD rows: 800GBASE-KR4, CR4, DR4, FR4-500, DR4-2, FR4, and LR4.

Response

Response Status W

ACCEPT IN PRINCIPLE.

Note that comment R1-54 corrects the delay in 183.4.1. Implement the suggested remedy with editorial license.

CI 183 SC 183.4.1 P567 L22 # R1-54

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A delay (B) (O)

Clause 183.4.1 states the maximum delay is '59,392 bit times (96 pause_quanta or 74.24 ns)'. The value '96 pause_quanta' is arithmetically wrong: 59,392 bit times / 512 = 116 pause_quanta; 116 x 640 ps = 74.24 ns. With 96 pause_quanta: 96 x 640 ps = 61.44 ns, inconsistent with the stated 74.24 ns. All other 800GBASE 4-lane PMD delay subclauses (178.6, 179.6, 180.4.1, 181.4.1, 182.4.1) correctly state 116 pause_quanta. The error was copied from Table 169-4 which also has this bug.

SuggestedRemedy

Change '96 pause_quanta' to '116 pause_quanta' in 183.4.1.

Response

Response Status W

ACCEPT.

CI 182 SC 182.1 P534 L35 # R1-55

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (O)

Incorrect cross-reference in 182.1: 'the purpose of each 800 Gb/s PHY sublayer is summarized in 116.2.' Subclause 116.2 covers 200 Gb/s/400 Gb/s Ethernet sublayer purposes; 800 Gb/s sublayer purposes are summarized in 169.2. The analogous Clause 180.1 (closely related clause) correctly says '169.2'.

SuggestedRemedy

Change 'summarized in 116.2' to 'summarized in 169.2' in the 800 Gb/s sentence of 182.1.

Response

Response Status C

ACCEPT.

Cl 185 SC 185.3.1.4 P626 L11 # R1-56

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (O)

Subclause title is 'PMD:IS_SIGNAL.request(SIGNAL_OK)' but the body text reads: 'The PMD:IS_SIGNAL.indication primitive is generated by the 800GBASE-LR1 Inner FEC to indicate the status of the transmit function via the SIGNAL_OK parameter.' The primitive name in the body is wrong -- it should be PMD:IS_SIGNAL.request (a request sent from the Inner FEC down to the PMD), not PMD:IS_SIGNAL.indication (which is the receive-direction primitive defined in the preceding subclause 185.3.1.3).

SuggestedRemedy

In the first sentence of 185.3.1.4, change 'The PMD:IS_SIGNAL.indication primitive' to 'The PMD:IS_SIGNAL.request primitive'.

Response Response Status C

ACCEPT IN PRINCIPLE.
Implement the suggested remedy with editorial license.

Cl 185 SC 185.5.11 P629 L49 # R1-57

Bruckman, Leon

NVIDIA

Comment Type E Comment Status A (B) (O)

Subclause title duplicates the word 'functions': '185.5.11 Autonomous path startup functions (APSU) functions'. All other PMD clauses (187.5.11, 180.5.12, etc.) use the consistent title 'Autonomous path startup (APSU) functions' without the leading 'functions' word.

SuggestedRemedy

Change '185.5.11 Autonomous path startup functions (APSU) functions' to '185.5.11 Autonomous path startup (APSU) functions'.

Response Response Status C

ACCEPT.

Cl 186 SC 186.2.2 P651 L15 # R1-58

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (L)

Two unfilled cross-reference placeholders remain in the normative text: (1) p. 650 line 15: 'FEC:IS_SIGNAL.request is mapped to the MNT bits (XREF) as shown in Table 186-1.' (2) p. 650 line 34: 'information from the received MNT bits (XREF) to determine the status...' Both placeholders should reference the subclause that defines the MNT bit mapping, which is 186.2.3.5.11.

SuggestedRemedy

Replace both '(XREF)' placeholders with '(see 186.2.3.5.11)'.

Response Response Status C

ACCEPT IN PRINCIPLE.
Resolved using the response to comment R1-138 (for xref on line 15) and using the response to comment R1-139 (for the other xref on line 34).

Cl 186 SC 186.2.3.5.11 P660 L1 # R1-59

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A (B) (L)

Off-by-one error in CSTAT bit range: the text states 'Bits 5-7 are used to convey the information encoded in am_sf<2:0>' but the code table immediately below assigns CSTAT<6>, CSTAT<7>, and CSTAT<8> to am_sf<0>, am_sf<2>, and am_sf<1> respectively. If CSTAT uses 1-based indexing (bits 1-8), then 'bits 5-7' corresponds to CSTAT<5>, <6>, <7> -- not <6>, <7>, <8>. The same error appears in 186.2.4.7.6.

SuggestedRemedy

In both 186.2.3.5.11 and 186.2.4.7.6, change CSTAT<6>, <7>, <8> to: CSTAT<5>, <6>, <7>.

Response Response Status W

ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the comment identifies an error in the text that should be corrected.

Figure 186-6 is 0-based, so align the text in the bullet list with that. Change the last 3 bullets to read:

- ù The resulting am_sf<0> signal is placed in CSTAT<5>
- ù The resulting am_sf<1> signal is logically ORed with IFEC_degraded_SER and placed in CSTAT<7>
- ù The resulting am_sf<2> signal is placed in CSTAT<6>.

CI 187 SC 187.3.1 P703 L17 # R1-60

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (O)

Three instances of incorrect primitive names in Clause 187.3.1 service interface semantics: (1) 187.3.1.1.2 'When generated' (p. 703 l.17): 'The 800GBASE-ER1 PMA generates PMA_UNITDATA.request continuously.' (2) 187.3.1.1.3 'Effect of receipt' (p. 702 l.21): 'The effect of receipt of the PMA_UNITDATA.request by the PMD...' (3) 187.3.1.2.2 'When generated' (p. 702 l.38): 'The PMD generates PMA_UNITDATA.indication continuously.' The correct primitive name at the PMD service interface is 'PMD:IS_UNITDATA.request/.indication', not 'PMA_UNITDATA.request/.indication'.

SuggestedRemedy

(1) Change 'PMA generates PMA_UNITDATA.request' to 'PMA generates PMD:IS_UNITDATA.request'. (2) Change 'receipt of the PMA_UNITDATA.request' to 'receipt of the PMD:IS_UNITDATA.request'. (3) Change 'PMD generates PMA_UNITDATA.indication' to 'PMD generates PMD:IS_UNITDATA.indication'.

Response Response Status C

ACCEPT IN PRINCIPLE.
Make the following changes.
On page 703 line 11 change "PMD:UNITDATA.request" to "PMD:IS_UNITDATA.request"
On page 703 line 17 change "PMA_UNITDATA" to "PMD:IS_UNITDATA.request"
On page 703 line 21 change "PMA_UNITDATA" to "PMD:IS_UNITDATA.request"
On page 703 line 32 change "PMD:UNITDATA.indication" to "PMD:IS_UNITDATA.indication"

On page 703 line 38 change "PMA_UNITDATA" to "PMD:IS_UNITDATA.indication"
Correct any other similar errors in the draft.
Implement with editorial license.

CI 175 SC 175.1.4 P289 L23 # R1-61

Bruckman, Leon

NVIDIA

Comment Type E Comment Status A (B) (L)

Typo: 'The lower interface of the PCS connects to a PMA or Inner FEC though the service interface below the PCS.' -- 'though' should be 'through'. The immediately preceding sentence correctly uses 'through'.

SuggestedRemedy

Change 'though the service interface' to 'through the service interface'.

Response Response Status C

ACCEPT.

CI 177 SC 177.5.8 P370 L19 # R1-63

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (L)

Redundant word: 'The values of Q are shown in table Table 177-3.' -- 'table' appears twice (lowercase then capitalized). The corresponding transmit sentence in 177.4.2 correctly reads '...shown in Table 177-3.'

SuggestedRemedy

Delete the lower-case 'table': '...shown in Table 177-3.'

Response Response Status C

ACCEPT.

CI 180 SC 180.1 P461 L10 # R1-64

Bruckman, Leon

NVIDIA

Comment Type E Comment Status A (B) (O)

Grammatical error: 'These PMDs types provide point-to-point...' -- 'PMDs' combined with 'types' is incorrect. Clause 183.1 correctly reads 'These PMD types provide...' The same error appears in Clause 182.1 (p. 530, line 9).

SuggestedRemedy

Change 'These PMDs types provide' to 'These PMD types provide' in 180.1 and 182.1.

Response Response Status C

ACCEPT.

CI 181 SC 181.1 P503 L8 # R1-65

Bruckman, Leon

NVIDIA

Comment Type E Comment Status A editorial (B) (O)

Two subject-verb disagreements: (1) 'The optical signals generated by this PMD type is modulated' -- plural 'signals' requires 'are modulated'. (2) 'The PMD provide point-to-point' -- singular 'PMD' requires 'provides'.

SuggestedRemedy

(1) Change 'is modulated' to 'are modulated'. (2) Change 'The PMD provide' to 'The PMD provides'.

Response Response Status C

ACCEPT IN PRINCIPLE.
Implement the suggested remedy with editorial license.

IEEE P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comment

Cl 177 SC 177.11.4.4 P384 L13 # R1-66

Bruckman, Leon

NVIDIA

Comment Type T Comment Status A (B) (L)

Missing feature name for TIM1

SuggestedRemedy

Add feature name to TIM1

Response Response Status C

ACCEPT IN PRINCIPLE.

Add feature name "Delay constraints" to TIM1.

Cl 177A SC 177A P849 L7 # R1-69

Bruckman, Leon

NVIDIA

Comment Type E Comment Status A (B) (L)

VPn arrows are different in the 3 annexes with test vectors 177A, 184A and 186A

SuggestedRemedy

Use the VPn arrows from Annex 184A for annexes 177A and 186A.

Response Response Status C

ACCEPT.

[Editor's note: also applies to annexes 177A, 186A]

Cl 176C SC 176C.5 P802 L14 # R1-70

Bruckman, Leon

NVIDIA

Comment Type TR Comment Status A delay (B) (E)

Table 176C-1 footnote b states 'One pause_quantum is equal to 2.56 ns for 200GAUI-1, 1.28 ns for 400GAUI-2, 640 ps for 800GAUI-4, and 256 ps for 1.6TAUI-8.' The value '256 ps for 1.6TAUI-8' is wrong. For 1.6TBASE-R, 1 pause_quantum = 512 bit times x 0.625 ps = 320 ps. The 1.6TAUI-8 row shows 144 pause_quanta / 46.08 ns: 144 x 320 ps = 46.08 ns (correct); 144 x 256 ps = 36.86 ns (does not match 46.08 ns). Table 176D-1 footnote b contains the identical error (p. 824).

SuggestedRemedy

In footnote b of Table 176C-1 (and identically in Table 176D-1), change '256 ps for 1.6TAUI-8' to '320 ps for 1.6TAUI-8'.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy with editorial license.

Cl 45 SC 45.2.3.1 P128 L37 # R1-71

Brown, Matthew

Qualcomm

Comment Type E Comment Status A (B) (L)

The editor's note has served its purpose.

SuggestedRemedy

Delete editor's note.

Also, delete similar editors notes at the following locations:

page 129 line 38

page 131 line 40 and line 51

page 132 line 47

page 133 line 41

page 134 line 46

page 135 line 12 and line 50

page 136 line 45

page 137 line 12

Response Response Status C

ACCEPT.

Cl 179 SC 179.11.2 P448 L7 # R1-75

Brown, Matthew

Qualcomm

Comment Type E Comment Status A (B) (E)

This editor's note has served its purpose.

SuggestedRemedy

Delete editor's note.

Response Response Status C

ACCEPT.

Cl 178A SC 178A.1.3 P853 L14 # R1-76

Brown, Matthew

Qualcomm

Comment Type E Comment Status A (B) (E)

This editor's note has served its purpose.

SuggestedRemedy

Delete editor's note.

Response Response Status C

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: Comment ID

Comment ID 76

Page 16 of 43

2026-07-14 5:58:37 AM

CI 186 SC 186.2.3.2 P652 L51 # R1-82

He, Xiang Huawei Technologies Co., Ltd

Comment Type T Comment Status A (B) (L)

"The stream of 257-bit blocks shall be distributed to 8 FEC flows in a round-robin manner" is not clear.

1. It only stated there are 8 FEC flows but not the numbering of them.
2. It should clearly state where the 257-bit blocks from flow 0 and flow 1 go to, in order to match the statement on the Rx side (186.2.4.10.1)

SuggestedRemedy

Change:

"The stream of 257-bit blocks shall be distributed to 8 FEC flows in a round-robin manner" to:

"The stream of 257-bit blocks shall be distributed to 8 FEC flows (0 through 7) in a round-robin manner, with 257-bit blocks from flow 0 distributed to even numbered FEC flows and 257-bit blocks from flow 1 distributed to odd numbered FEC flows."

Response Response Status C

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the proposed change improves the clarity of the draft.

Implement the suggested remedy with editorial license.

CI 182 SC 182.9.14 P554 L18 # R1-90

Johnson, John Broadcom Corporation

Comment Type E Comment Status A LRS wording (O) (B)

The sentence describing the application of the LRS TX exception table in 180.9.14 needs some additional clarification for better readability.

SuggestedRemedy

Replace "... meets the transmit characteristics given in Table 18207 except for characteristics in Table 180018 with references in 182.9." with "... meets the transmit characteristics given in Table 18207 except for the characteristics listed in Table 180018, with the references to 180.9 in that table replaced by the corresponding references in 182.9."

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-89.

CI 183 SC 183.9.14 P587 L1 # R1-91

Johnson, John Broadcom Corporation

Comment Type E Comment Status A LRS wording (O) (B)

The sentence describing the application of the LRS TX exception table in 180.9.14 needs some additional clarification for better readability.

SuggestedRemedy

Replace "... meets the transmit characteristics given in Table 18306 except for characteristics in Table 180018 with references in 183.9."

with "... meets the transmit characteristics given in Table 18306 except for the characteristics listed in Table 180018, with the references to 180.9 in that table replaced by the corresponding references in 183.9."

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-89.

CI 180 SC 180.9.6.3 P482 L20 # R1-94

El-Chayeb, Ahmad Keysight Technologies Inc

Comment Type ER Comment Status A TDECQ editorial (B) (O)

*** Comment submitted with the file image.png attached ***

Notation for X(n) is inconsistent with zn and yn

SuggestedRemedy

Change x(n) to xn

Response Response Status W

ACCEPT IN PRINCIPLE.

Resolved using the response to comment #114.

IEEE P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comment

CI 178 SC 178.8.8 P392 L29 # R1-104
 Simms, William NVIDIA Corporation
 Comment Type E Comment Status A (B) (E)
 No period at end of sentence
 SuggestedRemedy
 add period 179.8.8.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
 However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 178 SC 178.9.2 P393 L # R1-105
 Simms, William NVIDIA Corporation
 Comment Type T Comment Status R (withdrawn) (E)
 note for me: did we mean to drop package classes
 SuggestedRemedy
 Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

CI 178 SC 178.9.3.1 P398 L19 # R1-106
 Simms, William NVIDIA Corporation
 Comment Type E Comment Status A (B) (E)
 cites specification in 178.9.2.1 but should be 178.9.2.2
 SuggestedRemedy
 change reference to 178.9.2.2
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
 However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 178 SC 178.9.3 P397 L40 # R1-107
 Simms, William NVIDIA Corporation
 Comment Type E Comment Status A dERL (B) (E)
 Table 178-9 row 'Difference effective return loss, dERL (min) cites 178.9.3.6 and should be 178.9.3.7
 SuggestedRemedy
 change reference to 178.9.3.7
 Response Response Status C
 ACCEPT.

CI 178 SC 178.9.3.7 P403 L39 # R1-108
 Simms, William NVIDIA Corporation
 Comment Type E Comment Status A dERL (B) (E)
 question if Receiver Different ERL (178.9.3.7)should reference table 178-15 as Transmitter ERL does (178.9.2.3)
 SuggestedRemedy
 add table 178-15 if required
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Change "Table 17808 and Table 178014" to "Table 17808, Table 178014, and Table 178015

CI 178 SC 178.10 P404 L48 # R1-109
 Simms, William NVIDIA Corporation
 Comment Type E Comment Status R (withdrawn) (E)
 Note for me: check justification to lower SCMR from 20dB to 17dB. I see Rich's presentation for ERL of 17, but nothing for SCMR.
 SuggestedRemedy
 Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

Cl 178 SC 178.10.1 P406 L50 # R1-110
 Simms, William NVIDIA Corporation
Comment Type E Comment Status R (withdrawn) (E)
 Note no longer present "When channel scattering parameters are measured with a reference impedance other than R0, they shall be transformed per 178A.1.3 and Equation (178A04) before COM computation."
SuggestedRemedy
 if note unintentionally removed, add "When channel scattering parameters are measured with a reference impedance other than R0, they shall be transformed per 178A.1.3 and Equation (178A04) before COM computation."
Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

Cl 180 SC 180.5.2 P468 L8 # R1-111
 mi, guangcan Huawei Technologies Co., Ltd
Comment Type E Comment Status A (B) (O)
 "PMD:IS_UNITDATA_0.request to PMD:IS_UNITDATA_n01.request ", the use of primitives in this subclause has been changed to xxxx primitive. Should be consistent.
SuggestedRemedy
 change to "PMD:IS_UNITDATA_0.request primitive to PMD:IS_UNITDATA_n-1.request primitive"
Response Response Status C
 ACCEPT.
 Implement the suggested remedy.
 Also, add the word "primitive" where similarly appropriate throughout the draft.
 Implement with editorial license.

Cl 180 SC 180.9.5 P480 L5 # R1-112
 mi, guangcan Huawei Technologies Co., Ltd
Comment Type E Comment Status A editorial (B) (O)
 "OMA_outter" needs editorial fix.
SuggestedRemedy
 change outer to subscript.
Response Response Status C
 ACCEPT.

Cl 180 SC 180.9.6.1 P480 L53 # R1-113
 mi, guangcan Huawei Technologies Co., Ltd
Comment Type T Comment Status R (withdrawn) (O)
 this sentence talks about using the clock derived from the recovered clock from the AUI signal. The AUI interface here should be the AUI interface immediately attached to the PMA then the PMD under test, therefore can only be an AUI-C2M. AUI-C2C is not relevant here.
SuggestedRemedy
 change " an xAUI-n chip-to-chip (C2C) or chip-to-module (C2M) " to " an xAUI-n chip-to-module (C2M).
Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

Cl 180 SC 180.9.6.2 P482 L21 # R1-114
 mi, guangcan Huawei Technologies Co., Ltd
Comment Type E Comment Status A TDECQ editorial (B) (O)
 A series of variables are defined in this subclause. The variables z_n, y_n, and x(n) are all used to describe discrete values. While r(t), z(t), and eat(t) are used to represent continuous values dependent of t. It is better to change x(n) to x_n so that it is consistent with the discrete naming style.
SuggestedRemedy
 change x(n) to x_n. Implement with editorial license to fix other instances.
Response Response Status C
 ACCEPT IN PRINCIPLE.
 Implement the following change:
 change x(n) to x_n, where _n means n is subscript.

Cl 180 SC 180.9.6.4 P484 L1 # R1-115
 mi, guangcan Huawei Technologies Co., Ltd
Comment Type E Comment Status A TDECQ editorial (B) (O)
 "assumed a... for Gaussian noise ?(t), ". While when ?(t) was defined as "colored Gaussian noise".
SuggestedRemedy
 change to "for colored Gaussian noise ?(t), determine the equalizer"
Response Response Status C
 ACCEPT.

Cl 180 SC 180.9.6.4 P484 L7 # R1-116
mi, guangcan Huawei Technologies Co., Ltd
Comment Type E Comment Status A TDECQ editorial (B) (O)
"20 ÷ T/2 to 20 + T/2.", the division sign and the number "2" should be straight up
SuggestedRemedy
change the division sign and the number to straight up. Also the case in line 9 on the same page.
Response Response Status C
ACCEPT.

Cl 180 SC 180.9.8.1 P488 L46 # R1-120
mi, guangcan Huawei Technologies Co., Ltd
Comment Type ER Comment Status A TFT editorial (B) (O)
"TDECQ max" needs editorial fix
SuggestedRemedy
change to "TDECQ (max)"
Response Response Status W
ACCEPT.

Cl 180 SC 180.9.8.1 P488 L33 # R1-121
mi, guangcan Huawei Technologies Co., Ltd
Comment Type ER Comment Status A TFT editorial (B) (O)
"OMOuter", the outer should be subscript
SuggestedRemedy
change outer to subscript.
Response Response Status W
ACCEPT.

Cl 180 SC 180.9.8.1 P489 L27 # R1-122
mi, guangcan Huawei Technologies Co., Ltd
Comment Type ER Comment Status A TFT editorial (B) (O)
"OMA (max) spec " needs editorial fix
SuggestedRemedy
change to OMA_outer (max)". Where outer is subscript.
Response Response Status W
ACCEPT.

Cl 180 SC 180.9.8.1 P489 L30 # R1-123
mi, guangcan Huawei Technologies Co., Ltd
Comment Type ER Comment Status A TFT editorial (B) (O)
this sentencet "is the actual ORx receiver sensitivity OMA at the TECQ measured for the transmitter under test" needs editorial fix.
SuggestedRemedy
change to "is the Orx receiver sensitivity OMAouter at the measured TECQ of the transmitter under test"
Response Response Status W
ACCEPT.

Cl 180 SC 180.9.8.2 P489 L42 # R1-126
mi, guangcan Huawei Technologies Co., Ltd
Comment Type ER Comment Status A TFT editorial (B) (O)
"using the test pattern as given in Table 180÷14." no need of "as":
SuggestedRemedy
delete as
Response Response Status W
ACCEPT.

Cl 180 SC 180.9.9 P490 L33 # R1-127
mi, guangcan Huawei Technologies Co., Ltd
Comment Type ER Comment Status A overshoot editorial (B) (O)
P_max and P_min, max and min should be straight up
SuggestedRemedy
change max and min to straight up.
Response Response Status W
ACCEPT.

CI 181 SC 181.9.8 P521 L3 # R1-133
 Huber, Thomas Nokia
 Comment Type TR Comment Status A editorial (B) (O)
 The intent seems to be to refer to 180.9.8, but the text says 181.9.8 (which is this clause)..
 SuggestedRemedy
 Change 181.9.8 to 180.9.8.
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-17.

CI 186 SC 186.2.2 P651 L15 # R1-138
 Huber, Thomas Nokia
 Comment Type ER Comment Status A (B) (L)
 Missing crossreference 'XREF'
 SuggestedRemedy
 This should be pointing to 186.2.3.5.11; add the cross-reference
 Response Response Status W
 ACCEPT.

CI 186 SC 186.2.2 P651 L34 # R1-139
 Huber, Thomas Nokia
 Comment Type ER Comment Status A (B) (L)
 Missing crossreference 'XREF'
 SuggestedRemedy
 This should be pointing to 186.2.4.7.6; add the cross-reference
 Response Response Status W
 ACCEPT.

CI 178B SC 178B.8.2.1 P893 L42 # R1-144
 Huber, Thomas Nokia
 Comment Type TR Comment Status A Sublayer interfaces (CA) (Bp)
 The NOTE related to the variable adjacent_signal_ok seems not correct. It says:
 "NOTE - For an interface below a PMA or Inner FEC (AUI component or PMD), SIGNAL_OK is received via the IS_SIGNAL.request primitive of the service interface above the interface. For an interface above a PMA (AUI component), the SIGNAL_OK is received via the IS_SIGNAL.indication primitive of the service interface below the interface". Service interfaces are defined at the top of the sublayer - so for an interface below a PMA or Inner FEC, SIGNAL_OK is received via IS_SIGNAL.request for that layer that is below the PMA or Inner FEC. The primitive for the layer above (i.e., the PMA or Inner FEC) would be at the top of that layer above. In other words, if you want to communicate something down the stack, you use the layer below's service interface to do it.

SuggestedRemedy
 Change the first sentence of the note to read as follows:
 NOTE - For an interface below a PMA or Inner FEC (AUI component or PMD), SIGNAL_OK is received via the IS_SIGNAL.request primitive of the service interface of the AUI component or PMD.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-221.

CI 178B SC 178B.8.3.3 P900 L9 # R1-145
 Huber, Thomas Nokia
 Comment Type E Comment Status A (B) (CA)
 timers should be in alphabetical order
 SuggestedRemedy
 Move quiet_timer after propagation_timer
 Response Response Status C
 ACCEPT.

CI 179 SC 179.15.3 P459 L3 # R1-146

Healey, Adam Broadcom Inc.

Comment Type E Comment Status A (B) (E)

Item AUIAPSU states a requirement for the AUI which is already covered in 176C.6.3.. It does not belong in this table.

SuggestedRemedy

Remove item AUIAPSU. Consolidate items *AUI200G and AUIL200G in a single item, "AUIC2C" with Feature "AUI-n C2C" and Value/Comment "PMD is separated from the PCS by an AUI-C2C specified in Annex 120B, Annex 120D, Annex 120F, or Annex 176C".

Response Response Status C

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy with editorial license.

CI 178 SC 178.14.3 P413 L26 # R1-147

Healey, Adam Broadcom Inc.

Comment Type E Comment Status A PICS (B) (E)

There is no obvious reason to have AUI200G and AUIL200G as separate items. Also, per 21.6.2, the notation O.<n> means "at least one of the group of options labeled by the same numeral <n> is required." It is more appropriate to use O/<n> which means "one and only one of the group of options labeled by the same numeral <n> is required." The PMD is either in the same package as the PCS or it isn't.

SuggestedRemedy

Consolidate items *AUI200G and AUIL200G in a single item, "AUIC2C" with Feature "AUI-n C2C" and Value/Comment "PMD is separated from the PCS by an AUI-C2C specified in Annex 120B, Annex 120D, Annex 120F, or Annex 176C". Change the status for item PHY and new item AUIC2C to "PMD:O/3".

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 180 SC 180.9.14 P493 L11 # R1-148

Healey, Adam Broadcom Inc.

Comment Type E Comment Status A RXS editorial (B) (O)

Per IEEE 802.3 editorial guidelines

<http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html#numbers>, "Do not include any separators in the digits to the right of the decimal point or include any trailing zeros in tables or in text."

SuggestedRemedy

Remove trailing zeros from values in Table 180-20 as necessary. Similarly in Table 178-11, Table 179-14, and Table 185-16.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 186 SC 186.2.2 P651 L15 # R1-160

Mascitto, Marco Infinera Canada Inc.,Nokia

Comment Type E Comment Status A (B) (L)

I assume the XREF was not updated and should point to 186.2.3.5.11.

SuggestedRemedy

Update the XREF

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-138.

CI 186 SC 186.2.2 P651 L34 # R1-161

Mascitto, Marco Infinera Canada Inc.,Nokia

Comment Type E Comment Status A (B) (L)

I assume the XREF was not updated and should point to 186.2.3.5.11.

SuggestedRemedy

Update the XREF

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-139.

CI 186 SC 186.2.2 P651 L33 # R1-162

Mascitto, Marco Infinera Canada Inc.,Nokia

Comment Type ER Comment Status A (B) (L)

This sentence is difficult to read.

SuggestedRemedy

Replace:

The SIL function uses information received from the 800GBASE-ER1 PMA via PMA:IS_SIGNAL.indication and information from the received MNT bits (XREF) to determine the status communicated to the SIGNAL_OK value communicated via FEC:IS_SIGNAL.indication.

With:

The SIL function uses information received from the 800GBASE-ER1 PMA via PMA:IS_SIGNAL.indication and information from the received MNT bits (XREF) to determine the SIGNAL_OK value that is communicated via FEC:IS_SIGNAL.indication.

Response Response Status W

ACCEPT.

CI 186 SC 186.2.1 P649 L1 # R1-163

Mascitto, Marco Infinera Canada Inc.,Nokia

Comment Type TR Comment Status A (B) (L)

Regarding Figure 186-3 receive direction, the OH/FAM processing block should have an arrow pointing to the SIL block that indicates that MNT bits are used to determine the value of the SIGNAL_OK parameter for FEC:IS_SIGNAL.indication (see Table 186-2).

SuggestedRemedy

Add the arrow.

Response Response Status W

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-256.

CI 178B SC 178B.8.3.5 P902 L1 # R1-167

Mascitto, Marco Infinera Canada Inc.,Nokia

Comment Type TR Comment Status A State diagrams (CA)

Not all implementations may be able to support all the recovery methods shown in Figure 178B-10b. The FAIL state must be supported by all implementations (default).

SuggestedRemedy

Specify an implementation dependent variable that indicates the recovery modes supported as described in osorio_178b_03_260625.

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-248

CI 178B SC 178B.10 P907 L22 # R1-168

Slavick, Jeff Broadcom Inc

Comment Type TR Comment Status A (B) (CA)

remote_tf_lock is derived from the LP status frames not the LD status frames.

SuggestedRemedy

Change MDIO reference from 45.2.1.167 to 45.2.1.163 for remote_tf_lock in Table 178B-7.

Response Response Status W

ACCEPT.

CI 178B SC 178B.10 P906 L12 # R1-170

Slavick, Jeff Broadcom Inc

Comment Type T Comment Status A (B) (CA)

In Table 178B-6 we list both PMA_reset and PMD_reset which are mapped to the same MDIO register bit and these are then used by the "reset" variable.

SuggestedRemedy

In Table 178B-6 update PMA_reset Control variable name to "reset (PMA_reset, PMD_reset)" and remove the PMD_reset row.

Response Response Status C

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.

Implement the suggested remedy with editorial license.

In Table 178B-6 update PMA_reset Control variable name to "reset" and remove the PMD_reset row.

Implement with editorial license.

CI 178B SC 178B.10 P906 L34 # R1-172

Slavick, Jeff Broadcom Inc

Comment Type E Comment Status A (B) (CA)

Group all the mr variables together

SuggestedRemedy

Move mr_adj_loss_mode to be after mr_training_enable in Table 178B-6

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.168e P104 L13 # R1-173

Slavick, Jeff Broadcom Inc

Comment Type ER Comment Status A (B) (L)

In Table 45-133e adjacent loss mode uses RW while the other bits (and footnote) use R/W

SuggestedRemedy

make the RW a R/W

Response Response Status W

ACCEPT.

CI 185 SC 185.5.11 P630 L1 # R1-174

Slavick, Jeff Broadcom Inc

Comment Type T Comment Status A (B) (O)

All other clauses specifying APSU functions use the form of tx_mode = local_pattern when specifying the state and not "is".

SuggestedRemedy

Change "tx_mode is local_pattern" to "tx_mode = local_pattern"

Response Response Status C

ACCEPT.

CI 187 SC 187.5.11 P707 L50 # R1-175

Slavick, Jeff Broadcom Inc

Comment Type TR Comment Status A (B) (CA)

800G-ER1 is not really using the APSU functions. And it's better to point to the service interface where the mapping of signal_ok is done.

SuggestedRemedy

Change "APSU functions are supported by 800GBASE-ER1 FEC sublayer (see 186.2)."

To: "The 800GBASE-ER1 PMD supports APSU via the 800GBASE-ER1 FEC sublayer (see 186.2.2)."

Response Response Status W

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 178B SC 178B.8.2.1 P894 L17 # R1-176

Slavick, Jeff Broadcom Inc

Comment Type ER Comment Status A (Bp) (CA)

"the APSU" does not make sense.

SuggestedRemedy

Remove the word "the"

Response Response Status C

ACCEPT.

CI 178B SC 178B.5 P876 L38 # R1-177

Slavick, Jeff Broadcom Inc

Comment Type T Comment Status A (Bp) (CA)

This list of what the ILT functions are made of, not a pick which ones you want list.

SuggestedRemedy

Delete ", and" from the first item in the dashed list.

Response Response Status C

ACCEPT.

CI 179 **SC 179.8.9** **P426** **L31** # **R1-178**
 Slavick, Jeff Broadcom Inc
Comment Type **TR** **Comment Status** **A** (B) (E)
 We're using upper case for enumerations.
SuggestedRemedy
 In 179.8.9, 180.5.12, 181.5.12, 182.5.12, 183.5.12, 185.5.11 change local_pattern to LOCAL_PATTERN.
Response **Response Status** **W**
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-2.

CI 178B **SC 178B.7.2** **P880** **L14** # **R1-179**
 Slavick, Jeff Broadcom Inc
Comment Type **T** **Comment Status** **A** (B) (CA)
 We can be more specific on what "exit the transmit disable state" so it clears it's a variable change not a state diagram state change.
SuggestedRemedy
 Add "(tx_disable = false)" after "transmit disable state".
Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 Implement the suggested remedy with editorial license.

CI 178B **SC 178B.7.8** **P889** **L51** # **R1-180**
 Slavick, Jeff Broadcom Inc
Comment Type **T** **Comment Status** **A** (B) (CA)
 The TRAIN_LOCAL state in is Figure 178B-10a but you list both in this paragraph but only 10a in the next.
SuggestedRemedy
 In the 2nd paragraph of 178B.7.8 remove the "and Figure 178B-10b".
 In the 4th paragraph of 178B.7.8 add "and Figure 178B-10b" after Figure 178B-10a
Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 Implement the suggested remedy with editorial license.

CI 178B **SC 178B.7.8.4** **P891** **L26** # **R1-181**
 Slavick, Jeff Broadcom Inc
Comment Type **ER** **Comment Status** **A** (B) (CA)
 Missing an E in EQUALIZATION
SuggestedRemedy
 Change QUALIZATION to EQUALIZATION on lines 26 and 33.
Response **Response Status** **W**
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-29.

CI 178B **SC 178B.8.3** **P896** **L40** # **R1-182**
 Slavick, Jeff Broadcom Inc
Comment Type **TR** **Comment Status** **A** (B) (CA)
 We've gone from a bit akward to really akward.
 D3.0 was:
 An interface using the E1 format implements one instance of each of the training control, the training frame lock and the coefficient update state diagrams, and their associated variables, functions, counters and timers defined in this subclause, independently for each lane.
 D3.1 is :
 An interface using the E1 format implements one instance per lane of each of the training control, the training frame lock and the coefficient update state diagrams, and their associated variables, functions, counters and timers defined in this subclause.
SuggestedRemedy
 make it:
 Each lane of an interface using the E1 format implements one instance of each of the training control, the training frame lock and the coefficient update state diagrams, and their associated variables, functions, counters and timers defined in this subclause.
Response **Response Status** **W**
 ACCEPT IN PRINCIPLE.
 Implement the suggested remedy with editorial license.

CI 178B SC 178B.8.3 P896 L44 # R1-183

Slavick, Jeff Broadcom Inc

Comment Type TR Comment Status A (B) (CA)

We've gone from a bit awkward to really awkward.

D3.0 was:

An interface using the O1 format implements one instance of each of the training control and the training frame lock state diagrams, and their associated variables, functions, counters and timers defined in this subclause, independently for each lane.

D3.1 is :

An interface using the O1 format implements one instance per lane of each of the training control and the training frame lock state diagrams, and their associated variables, functions, counters and timers defined in this subclause..

SuggestedRemedy

make it:

Each lane of an interface using the O1 format implements one instance of each of the training control and the training frame lock state diagrams, and their associated variables, functions, counters and timers defined in this subclause.

Response Response Status W

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 179 SC 179.9.4.2.3 P431 L22 # R1-184

Slavick, Jeff Broadcom Inc

Comment Type ER Comment Status A (B) (E)

We have updated the enumerations to be upper case so we should use upper case in Table 179-8 too

SuggestedRemedy

Change initialize to INITIALIZE and preset to PRESET in Table 179-8, Table 179-9 and their footnotes

In 178.9.3.4.3 change preset 1 to PRESET 1

In 178.9.3.6 change preset 1 to PRESET 1 in the NOTE (twice)

In 179.8.9 change preset 1 to PRESET 1 and preset 6 to PRESET 6

In 179.9.4.2.1 change "preset 1" to PRESET 1 (removing the "s")

In 179.9.4.2.2 change preset 1 to PRESET 1

In 179.9.5.3.3 change preset 1 to PRESET 1 in step b)

In 179.9.5.3.5 change preset 1 to PRESET 1

In 179.9.5.5.5 change preset 1 to PRESET 1 in the NOTE (twice)

In 176C.6.4.5.3 change preset 1 to PRESET 1 in step 3

In 176C.6.4.7 change preset 1 to PRESET 1 in the NOTE (twice)

In 176D.8.7 change preset 1 to PRESET 1

In 176D.8.12.2 change preset 1 to PRESET 1 in step c)

In 176D.8.12.4 change preset 1 to PRESET 1

In 176D.8.14 change preset 1 to PRESET 1 in the NOTE (twice)

Response Response Status W

ACCEPT.

[Editor's note: also applies to clauses 178, 179, 176C, 176D]

CI 178B SC 178B.8.3.1 P898 L6 # R1-185

Slavick, Jeff Broadcom Inc

Comment Type TR Comment Status A Variables (CA)

With the addition of the recovery states (branches out of PATH_READY) the you now have local_rx_ready being used when mr_training_enable = true and training=false. Only when both mr_training_enable = true and training=true can local_rx_ready be dependent upon having optimized the remote transmitter.

SuggestedRemedy

Change "mr_training_enable" to "training" in the definition of local_rx_ready.

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-245.

IEEE P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comment

CI **178B** SC **178B.8.3.1** P**898** L**7** # **R1-186**
 Slavick, Jeff Broadcom Inc
 Comment Type **E** Comment Status **A** (B) (CA)
 Missing space
 SuggestedRemedy
 Insert a space at the start of the sentence that begins with "The specific conditions"
 Response Response Status **C**
 ACCEPT.

CI **178B** SC **178B.8.3.5** P**901** L**26** # **R1-187**
 Slavick, Jeff Broadcom Inc
 Comment Type **TR** Comment Status **A** State diagrams (CA)
 In Figure 136-7 we require that remote_tp_mode be not PAM2 before moving to TRAIN_REMOTE.
 In 178B.x.x.x we state that transmitting non-PAM2 is required but there is no normative statement to that effect in that paragraph.
 SuggestedRemedy
 Add "(remote_tp_mode != PAM2)" as a criteria for the transition from TRAIN_LOCAL to TRAIN_REMOTE in Figure 178B-10a
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.

Implement the suggested remedy and add new variable as follows:
 remote_tp_mode Enumerated variable that corresponds to the "modulation and precoding status" bits in the status field of received training frames. It may be assigned one of the following values: pam2, pam4, pam4 with precoding."

Implement with editorial license.

CI **178B** SC **178B.8.3.5** P**902** L**27** # **R1-189**
 Slavick, Jeff Broadcom Inc
 Comment Type **TR** Comment Status **A** State diagrams (CA)
 Not all implementations may be capable of supporting all recover modes.
 SuggestedRemedy
 Implement the suggested updates in "Indication of support for recovery states" presentation to the June 25, 2026 178B ad-hoc
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-248

CI **0** SC **0** P**14** L**16** # **R1-190**
 Maguire, Valerie Copperopolis
 Comment Type **E** Comment Status **A** (B) (CG)
 Final FM files have been generated by Pete Anslow and reviewed by the P802.3dg Editorial team. It seems impossible that IEEE Std 802.3dg won't publish this year.
 SuggestedRemedy
 Replace "20xx" with "2026"
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Change all instances of "802.3dg-20xx" to "802.3dg-2026".

CI **181** SC **181.9.8** P**521** L**3** # **R1-197**
 Dudek, Michael Marvell
 Comment Type **ER** Comment Status **A** editorial (B) (O)
 This is a circular reference.
 SuggestedRemedy
 Change 181.9.8 to 180.9.8
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-17.

CI 179 SC 179.11.3.2 P448 L45 # R1-199

Dudek, Michael

Marvell

Comment Type TR Comment Status A (B) (E)

The cable assembly S parameters should be used for these tests not those for the channel. Channel isn't defined here

SuggestedRemedy

Change "channel" to "cable assembly" in 4 places

Response Response Status W

ACCEPT.

CI 176C SC 176C.6.4.4 P808 L53 # R1-200

Dudek, Michael

Marvell

Comment Type T Comment Status A BLER extrapolation (CB)

Measuring the very low probabilities in this table is not possible in a reasonable test time and also is not necessary as they are much lower than the required Frame loss ratio probability.

SuggestedRemedy

Below the table add a note "In order to predict whether a receiver meets the BLER requirement in a short test time it is acceptable to have zero counts in a 10 second test for any bin which has a probability less than 1e-11.

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-201.

CI 176D SC 176D.8.11 P839 L30 # R1-201

Dudek, Michael

Marvell

Comment Type T Comment Status A BLER extrapolation (CB)

Measuring the very low probabilities in this table is not possible in a reasonable test time and also is not necessary as they are much lower than the required Frame loss ratio probability.

SuggestedRemedy

Below the table add a note "In order to predict whether a receiver meets the BLER requirement in a short test time it is acceptable to have zero counts in a 10 second test for any bin which has a required probability less than 1e-11.

Response Response Status C

ACCEPT IN PRINCIPLE.

The following contributions were reviewed by the CRG:
https://www.ieee802.org/3/dj/public/26_07/dudek_3dj_01_2607.pdf
https://www.ieee802.org/3/dj/public/26_07/ran_3dj_04a_2607.pdf

Based on on straw polls TF-1 and TF-2 there is consensus to adopt the proposed changes in ran_3dj_04a_2607.

Implement the proposed changes on slide 15 of ran_3dj_04a_2607 with editorial license.

Straw poll TF-1 (pick one) directional

I support adding guidance for shortened test time for BLER receiver tests for C2M and C2C AUIs.

Y: 36

N: 10

Straw poll TF-2 (pick one) directional

I support adopting the proposal in:

A: ran_3dj_04a_2607 slide 15

B: dudek_3dj_01_2607 slide 6

A: 32 B: 9

Ξ P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comment

CI 120F SC 120F.1 P733 L26 # R1-202

Dudek, Michael

Marvell

Comment Type TR Comment Status A (B) (CG)

Figure 120F-1 (and Figure 120G-1) show the 1.6TAUI-16 between BM-PMA's however the rest of the draft indicates that the 1.6TBASE-R SM-PMA is used.

SuggestedRemedy

Add a footnote to the 1.6TAUI-16 indications in Figures 120F-1 and 120F-2 stating that the 1.6TAUI-16 SM-PMA is used. Or probably better replace BM-PMA with PMA and add a footnote to that stating. "BM-PMA's are used for 200GAUI-2, 400GAUI-4 and 800GAUI-8, the 1.6GAUI-16 uses the SM-PMA. Consider also

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft.

In Figure 120F-1 and Figure 120G-1, change all instances of BM-PMA to PMA.

[Editor's note: changed clause/subclause/page/line from 180/180.1/463/49 to 120F/120F.1/733/26]

CI 180 SC 180.5.1 P467 L20 # R1-203

Dudek, Michael

Marvell

Comment Type E Comment Status A wording (B) (O)

The sentence can be worded better

SuggestedRemedy

Replace "While TP2 and the patch cord for transmitter measurements and tests are shown in Figure 18302, they are not part of the medium" with "While TP2 and the patch cord used for transmitter measurements and tests are shown in Figure 18302, they are not part of the medium." Make the same change in clauses 181, 182 and 183

Response Response Status C

ACCEPT.

CI 180 SC 180.9.6.4 P483 L54 # R1-204

Dudek, Michael

Marvell

Comment Type E Comment Status A TDECQ editorial (B) (O)

typo

SuggestedRemedy

Change "capture waveform" to "captured waveform"

Response Response Status C

ACCEPT.

CI 180 SC 180.9.8.2 P489 L43 # R1-206

Dudek, Michael

Marvell

Comment Type E Comment Status A TFT editorial (B) (O)

Referring to 180.9.8.2 in 180.9.8.2 is a circular reference.

SuggestedRemedy

Delete "using the method in 180.9.8.2"

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved using the response to comment R1-14.

CI 178 SC 178.9.2 P393 L25 # R1-211

Dudek, Michael

Marvell

Comment Type TR Comment Status A RLdc (B) (E)

The transmitter common-mode to differential mode return loss is specified in 178.9.2.7 but is missing from Table 178-6

SuggestedRemedy

Add Common-mode to differenential-mode return loss RLdc(min) to Table 178-6. Reference 178.9.2.7 and value Equation 178-2

Response Response Status W

ACCEPT.

CI 176C **SC 176C.6.4.5.2** **P810** **L38** # **R1-212**
Dudek, Michael Marvell
Comment Type **T** **Comment Status** **A** *RX test calibration (B) (E)*
"package class A" no longer exists in Table 176C-2.
SuggestedRemedy
Delete "for package class A"
Response **Response Status** **C**
ACCEPT.

CI 178B **SC 178B.8.3.5** **P902** **L11** # **R1-213**
Law, David Hewlett Packard Enterprise
Comment Type **E** **Comment Status** **A** *(B) (CA)*
Subclause 178B.8.1 'State diagram conventions' says 'The notation used in the state diagrams follows the conventions of 21.5.'. Table 2101 'State diagram operators' in subclause 21.5 defines the use of the [left arrow] character as the 'Assignment operator'.
SuggestedRemedy
Change the two instances of the use of the characters '<=' as the assignment operator in the WAIT_DATAPATH state in Figure 178B010b 'Training control state diagram, part 2' to use the [left arrow] character.
Response **Response Status** **C**
ACCEPT.

CI 169 **SC 169.3.2** **P211** **L45** # **R1-214**
Law, David Hewlett Packard Enterprise
Comment Type **E** **Comment Status** **A** *(B) (CG)*
Since a new Figure 16902a is being inserted after Figure 16902 (see page 213), suggest that '... are illustrated in Figure 16902, Figure 16903, Figure 18502 ...' should read '... are illustrated in Figure 16902, Figure 16902a, Figure 16903, Figure 18502 ...'.
SuggestedRemedy
See comment
Response **Response Status** **C**
ACCEPT IN PRINCIPLE.
Update text as proposed in the comment field with editorial license.

CI 173 **SC 173.4.2** **P273** **L1** # **R1-215**
Law, David Hewlett Packard Enterprise
Comment Type **E** **Comment Status** **A** *(B) (L)*
The editing instructions for the figure in subclause 173.4.2 '8:32 PMA' say 'Replace Figure 17303 with the following', and the title of Figure 17303 is '8:32 PMA functional block diagram'. On review of the published IEEE Std 802.3-2024, I believe that Figure 17303 is '32:8 PMA functional block diagram', and it is Figure 17304, which is part of subclause 173.4.2 '8:32 PMA', that is '8:32 PMA functional block diagram'.

SuggestedRemedy
Suggest that 'Replace Figure 17303 with the following:' should read 'Replace Figure 17304 with the following' and that 'Figure 1730308:32 PMA functional block diagram' should read 'Figure 1730408:32 PMA functional block diagram'.

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

CI 176D **SC 176D.4** **P825** **L12** # **R1-216**
Law, David Hewlett Packard Enterprise
Comment Type **T** **Comment Status** **A** *(B) (E)*
Figure 176D03 illustrates PMA:IS_UNITDATA_0:k.request as an arrow output from the top of the k:n PMA input to the bottom of the C2M Component (module side) above. This doesn't seem correct, as IS_UNITDATA_0:k.request is the transmit path and should therefore be output by the C2M component (module side) and input to the k:n PMA (see Figure 176-2).

SuggestedRemedy
Reverse the direction of the PMA:IS_UNITDATA_0:k.request between the C2M Component (module side) and the k:n PMA.

Response **Response Status** **C**
ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 178B SC 178B.5 P877 L6 # R1-217

Law, David Hewlett Packard Enterprise

Comment Type TR Comment Status A Sublayer interfaces (CA) (Bp)

Figure 178B 'RTS and ILT functions within interfaces' shows the SIGNAL_OK parameter of inst:IS_SIGNAL.request and the tx_symbol parameter of inst:IS_UNITDATA_i.request primitives as inputs to the RTS function and transmit function, respectively, and the SIGNAL_OK parameter of inst:IS_SIGNAL.indication and the rx_symbol parameter of inst:IS_UNITDATA_i.indication as outputs from the RTS function and receive function, respectively.

The definition for the adjacent_signal_ok variable in subclause 178B.8.2.1 includes the note 'For an interface below a PMA or Inner FEC (AUI component or PMD), SIGNAL_OK is received via the IS_SIGNAL.request primitive of the service interface above the interface. For an interface above a PMA (AUI component), the SIGNAL_OK is received via the IS_SIGNAL.indication primitive of the service interface below the interface.'

Subclause 176C.4 'Service interfaces' says 'For an AUI component above the AUI channel, the SIGNAL_OK parameter of the PMA:IS_SIGNAL.indication primitive corresponds to the variable rts_status of the RTS function, as defined in 178B.8.2.1.' and 'For an AUI component below the AUI channel, the SIGNAL_OK parameter of the PMA:IS_SIGNAL.request primitive corresponds to the variable rts_status of the RTS function, as defined in 178B.8.2.1.'

Figure 176C03 shows PMA:IS_UNITDATA_0:k.request as an input to the interface below the PMA, the C2C component (host side), and PMA:IS_UNITDATA_0:k.request as an output from the interface above the PMA, the C2C component (module side).

As a result, I believe that the figure only illustrates an interface below a PMA.

Suggested Remedy

Change the title of Figure 178B03 'RTS and ILT functions within interfaces' to read 'RTS and ILT functions within an interface below a PMA (AUI component or PMD)' and add a new Figure titled 'RTS and ILT functions within an interface above a PMA (AUI component)' with the PAM service interface primitives mirrored.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.

Instead of adding a new figure, Figure 178B-3 can use the same convention as Figure 178B-4.

In Figure 178B-3 change "SIGNAL_OK parameter of inst:IS_SIGNAL.request" and "SIGNAL_OK parameter of inst:IS_SIGNAL.indication" to "SIGNAL_OK" and add the same notes as in Figure 178B-4.

CI 178B SC 178B.8.2.1 P893 L53 # R1-218

Law, David Hewlett Packard Enterprise

Comment Type TR Comment Status A Sublayer interfaces (CA) (B)

Subclause 178B.6 'RTS function' says that 'The state of the rts_status variable is provided by the interface to the adjacent interface via the service interface SIGNAL_OK parameter.'. Subclause 176D.4 'Service interfaces' says that 'For an AUI component above the AUI channel, the SIGNAL_OK parameter of the PMA:IS_SIGNAL.indication primitive corresponds to the variable rts_status of the RTS function ...' and that 'For an AUI component below the AUI channel, the SIGNAL_OK parameter of the PMA:IS_SIGNAL.request primitive corresponds to the variable rts_status of the RTS function ...'.

As a result, I believe that the rts_status variable maps to the SIGNAL_OK parameter of the IS_SIGNAL.indication primitive if the interface is below the PMA, and to the SIGNAL_OK parameter of the IS_SIGNAL.request primitive if the interface is above the PMA.

Suggested Remedy

[1] Add the following text to the rts_status variable definition:

The rts_status maps to the SIGNAL_OK parameter of the output IS_SIGNAL primitive on the service interface.

[2] Based on the note provided for the adjacent_signal_ok variable, which is mapped from the SIGNAL_OK parameter, add the following note to the rts_status variable:

NOTE: For an interface below a PMA or Inner FEC (AUI component or PMD), rts_status maps to the SIGNAL_OK parameter of the IS_SIGNAL.indication primitive of the service interface above the interface. For an interface above a PMA (AUI component), rts_status maps to the SIGNAL_OK parameter of the IS_SIGNAL.request primitive of the service interface below the interface.

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.

Implement the suggested remedy with editorial license.

CI 178B SC 178B.5 P878 L14 # R1-219

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status A (B) (CA)

Subclause 178B.8.2.1 'Variables' defines adjacent_signal_ok as an 'Enumerated variable derived from the value of the SIGNAL_OK parameter on the service interface.'. The SIGNAL_OK parameter is shown as an input to the RTS Function, and the adjacent_signal_ok variable is used by the ILT function (see Figure 178B010b Training control state diagram, part 2). It, therefore, appears that the adjacent_signal_ok variable is derived from the SIGNAL_OK parameter by the RTS Function, and then passed to the ILT function.

SuggestedRemedy

Add an arrow labelled 'adjacent_signal_ok' from the RTS Function box to the ILT function box.

Response Response Status C

ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot. However, the change proposed in the suggested remedy is an improvement to the draft.
Implement the suggested remedy with editorial license.

CI 178B SC 178B.8.2.1 P893 L39 # R1-221

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status A (Bp) (CA)

Suggest that it should be clarified that the adjacent_signal_ok variable is derived from the SIGNAL_OK parameter of the input IS_SIGNAL primitive on the service interface.

SuggestedRemedy

[1] Change the text '... the SIGNAL_OK parameter on the service interface.' to read '... the SIGNAL_OK parameter of the input IS_SIGNAL primitive on the service interface.'. [2] Change the NOTE to read 'NOTE: For an interface below a PMA or Inner FEC (AUI component or PMD), the adjacent_signal_ok variable is derived from the SIGNAL_OK parameter of the IS_SIGNAL.request primitive of the service interface above the interface. For an interface above a PMA (AUI component), the adjacent_signal_ok variable is derived from the SIGNAL_OK parameter of the IS_SIGNAL.indication primitive of the service interface below the interface.'

Response Response Status C

ACCEPT IN PRINCIPLE.
Implement the suggested remedy with editorial license.

CI 173 SC 173.4.2 P1273 L1 # R1-222

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status R (withdrawn) (L)

The editing instructions for the figure in subclause 173.4.2 '8:32 PMA' say 'Replace Figure 17303 with the following', and the title of Figure 17303 is '8:32 PMA functional block diagram'. On review of the published IEEE Std 802.3-2024, Figure 17303 is '32:8 PMA functional block diagram', and it is Figure 17304, which is part of subclause 173.4.2 '8:32 PMA', that is '8:32 PMA functional block diagram'.

SuggestedRemedy

Suggest that 'Replace Figure 17303 with the following:' should read 'Replace Figure 17304 with the following' and that 'Figure 17303: 8:32 PMA functional block diagram' should read 'Figure 17304: 8:32 PMA functional block diagram'.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 180 SC 180.7.1 P471 L33 # R1-231

Maniloff, Eric Ciena Corporation

Comment Type TR Comment Status R average power (O)

To meet the (OMAouter)min requirement of -1 + max(TECQ,TDECQ) dBm at max TECQ/TDECQ of 3.4dB with minimum ER requires a minimum of 3.6dBm of optical average launch power. Current average launch power (max) is specified at 4dBm. The margin of 0.4dB is not practical for manufacturing, temperature, aging. A minimum of 1 dB of difference between min and max value is required for product manufacturing and across lifetime and environmental conditions for the worst TDECQ at the minimum ER specified to satisfy the (OMAouter)min requirement. Typically this difference has been 1.5 dB.

SuggestedRemedy

Change value in table 180-7, Average launch power, each lane(max) from "4" dBm to "5" dBm.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

EE P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comment

Cl 180	SC 180.7.2	P 473	L 15	# R1-232
Maniloff, Eric		Ciena Corporation		
Comment Type	TR	Comment Status	R	average power (O)
Changing the Tx Power Max, requires a corresponding update to the Average receive power, each lane(max).				
SuggestedRemedy				
Change value in table 180-8, Average receive power, each lane(max) from "4" dBm to "5" dBm, and increase the damage threshold to maintain a 1dB offset from the Average receive power (max)				
Response	Response Status Z			
REJECT.				
This comment was WITHDRAWN by the commenter.				

Cl 182	SC 182.7.1	P 542	L 35	# R1-233
Maniloff, Eric		Ciena Corporation		
Comment Type	TR	Comment Status	R	average power (O)
To meet the (OMAouter)min requirement of -1 + max(TECQ,TDECQ) dBm at max TECQ/TDECQ of 3.4dB with minimum ER requires a minimum of 3.6dBm of optical average launch power. Current average launch power (max) is specified at 4dBm. The margin of 0.4dB is not practical for manufacturing, temperature, aging. A minimum of 1 dB of difference between min and max value is required for product manufacturing and across lifetime and environmental conditions for the worst TDECQ at the minimum ER specified to satisfy the (OMAouter)min requirement. Typically this difference has been 1.5 dB.				
SuggestedRemedy				
Change value in table 182-7, Average launch power, each lane(max) from "4" dBm to "5" dBm.				
Response	Response Status Z			
REJECT.				
This comment was WITHDRAWN by the commenter.				

Cl 182	SC 182.7.2	P 544	L 16	# R1-234
Maniloff, Eric		Ciena Corporation		
Comment Type	TR	Comment Status	R	average power (O)
Changing the Tx Power Max, requires a corresponding update to the Average receive power, each lane(max).				
SuggestedRemedy				
Change value in table 182-8, Average receive power, each lane(max) from "4" dBm to "5" dBm, and increase the damage threshold to maintain a 1dB offset from the Average receive power (max)				
Response	Response Status Z			
REJECT.				
This comment was WITHDRAWN by the commenter.				

Cl 180	SC 180.7	P 470	L 46	# R1-238
Maniloff, Eric		Ciena Corporation		
Comment Type	E	Comment Status	A	editorial (B) (O)
(e.g., a 400GBASE-DR4 PMDà" Should refer to 400GBASE-DR2, as this clause is about 200G/lane PMDs				
SuggestedRemedy				
Replace 400GBASE-DR4 with 400GBASE-DR2				
Response	Response Status C			
ACCEPT.				

CI 176D SC 176D.8.12.2 P842 L30 # R1-241

Rysin, Alexander

NVIDIA

Comment Type ER Comment Status A (B) (E)

The word "noise" appears twice in succession:

"For a given noise RMS noise voltage s_{ns} measured at the Tx test reference, the spectral density of the noise source $N_s(f)$ used for calculation of COM may be calculated using Equation (179018)."

SuggestedRemedy

Change:

"For a given noise RMS noise voltage s_{ns} measured at the Tx test reference..."
to:

"For a given RMS noise voltage s_{ns} measured at the Tx test reference..."

Response Response Status W

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 179 SC 179.9.5.3.3 P441 L45 # R1-242

Rysin, Alexander

NVIDIA

Comment Type E Comment Status A (B) (E)

The word "noise" appears twice in succession:

"For a given noise RMS noise voltage s_{ns} measured at the Tx test reference, the spectral density of the noise source $N_s(f)$ used for calculation of COM may be calculated using Equation (179018)."

SuggestedRemedy

Change:

"For a given noise RMS noise voltage s_{ns} measured at the Tx test reference..."
to:

"For a given RMS noise voltage s_{ns} measured at the Tx test reference..."

Response Response Status C

ACCEPT IN PRINCIPLE.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

However, the change proposed in the suggested remedy is an improvement to the draft. Implement the suggested remedy.

CI 176D SC 176D.8.3.4 P836 L45 # R1-243

Rysin, Alexander

NVIDIA

Comment Type TR Comment Status A (B) (E)

176D.8.3.4 cites the wrong equation numbers for two of the three modal return loss mask requirements. The subclause currently reads:

"The common-mode to common-mode return loss specification is satisfied by either meeting the requirement of Equation (179015) or having ERL_CC value higher than the specification in Table 176D09."

"The common-mode to differential-mode return loss specification is satisfied by either meeting the requirement of Equation (179016) or having ERL_DC higher than the value in Table 176D09."

Common-mode to common-mode (CC) return loss mask (RLcc) is defined in Eq. 179014 and common-mode to differential-mode (DC) return loss mask (RLdc) is defined in Eq. 179015.

SuggestedRemedy

In 176D.8.3.4, first sentence, change "Equation (179015)" to "Equation (179014)."

In 176D.8.3.4, second sentence, change "Equation (179016)" to "Equation (179015)."

Response Response Status W

ACCEPT.

CI 178B SC 178B.8.3.1 P898 L8 # R1-244

Osorio, Luz

Nokia

Comment Type ER Comment Status A (B) (CA)

Missing space after period in "[...] that the remote transmit has been optimized if `mr_training_enable` is true, that the local receive equalizers have been optimized, and that no further adjustments are required for normal data transmission. The specific conditions for"

SuggestedRemedy

"that the remote transmit has been optimized if `mr_training_enable` is true, that the local receive equalizers have been optimized, and that no further adjustments are required for normal data transmission. The specific conditions for"

Response Response Status W

ACCEPT.

Cl 178B SC 178B.8.3.1 P898 L7 # R1-245

Osorio, Luz

Nokia

Comment Type TR Comment Status A Variables (CA)

Since the recovery after failure of local_rx_ready does not mandate training takes place (sending ILT frames), it is not possible for the receiver to optimize the remote transmit by requesting adjustments from the local receiver.

Change mr_training_enable to training in the definition

SuggestedRemedy

"that the remote transmit has been optimized if mr_training_enable training is true, that the local receive equalizers have been optimized, and that no further adjustments are required for normal data transmission. The specific conditions for"

Response Response Status C

ACCEPT IN PRINCIPLE.

Change

"if mr_training_enable is true"

To

"if training = true"

Implement with editorial license.

Cl 178B SC 178B.8.3.1 P897 L26 # R1-246

Osorio, Luz

Nokia

Comment Type ER Comment Status R Variables (CA) (B)

Add a reference to the INITIALIZE definition. Use the same format as the rest of the document.

"or the value INITIALIZE."

SuggestedRemedy

"or the INITIALIZE setting in table 179-8."

Response Response Status W

REJECT.

ic_req holds the enumeration not the TX FIR actual value.

Its value is a set of enumerations which is all the enumerations that ic_sel can take on plus INITIALIZE. The existing definition is correct as written.

Cl 178B SC 178B.8.3.5 P901 L4 # R1-247

Osorio, Luz

Nokia

Comment Type ER Comment Status A (B) (CA)

The starting state uses the name INITIALIZE which could be mistaken with the INITIALIZE coefficient setting. Suggest using START

SuggestedRemedy

Change INITIALIZE to START

Response Response Status W

ACCEPT.

Cl 178B SC 178B.8.3.5 P902 L40 # R1-248

Osorio, Luz

Nokia

Comment Type TR Comment Status A State diagrams (CA)

add recovery options and ability variables as proposed in osorio_178b_03_260625

An updated proposal presentation will be provided if there are changes required after the June 25th ad-hoc

SuggestedRemedy

Implement changes per the presentation proposal

Response Response Status C

ACCEPT IN PRINCIPLE.

The following contribution was reviewed by participants at the IEEE 802.3dj Clause 178B ad hoc meeting on June 25:

https://www.ieee802.org/3/dj/public/adhoc/178b/26_0625/osorio_178b_01a_260625.pdf

A related straw poll taken at the meeting indicated unanimous support as recorded in the following report:

https://www.ieee802.org/3/dj/public/adhoc/178b/26_0625/polls_178b_260625.pdf

Implement, with editorial license, the proposed changes on slides 5 through 10 of the osorio_178B_01a_260625.

Cl 178B **SC 178B.10** **P906** **L7** # **R1-249**
 Osorio, Luz Nokia
Comment Type **TR** **Comment Status** **A** **Management (CA)**
 Add management variables proposed in osorio_178b_03_260625
 An updated proposal presentation will be provided if there are changes required after the June 25th ad-hoc
SuggestedRemedy
 Implement changes per the presentation proposal
Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 Resolved using the response to comment R1-248.

Cl 180 **SC 180.12.4.1** **P499** **L7** # **R1-251**
 Law, David Hewlett Packard Enterprise
Comment Type **T** **Comment Status** **A** **PICS (Bp) (O)**
 PICS item F9 'Global Signal Detect function', referencing subclause 180.5.4, says 'Report to the PMD service interface the message PMD:IS_SIGNAL.indication (SIGNAL_DETECT)' and item F10 'Global Signal Detect behavior', also referencing subclause 180.5.4, says SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes'.
 I don't think this is correct, as the Global_PMD_signal_detect variable defined in subclause 180.5.4 'PMD global signal detect function' is only used by the MDIO registers, with the PMD:IS_SIGNAL.indication primitive generated by the RTS function.
 In addition, doesn't a 200GBASE-DR1 PMD have only one lane, a 400GBASE-DR2 PMD have only two lanes, but a 1.6TBASE-DR8 PMD have eight?
SuggestedRemedy
 Delete PICS item F9 and change the Value/Comment text of PICS item F10 from 'SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes' to 'Global_PMD_signal_detect is an indicator of the presence of an optical signal on all lanes, or lane 0 for a 200GBASE-DR1 PMD.
Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 The comment addresses an error in the draft. However, it is sufficient to use "all lanes" for any of the PMD types since all lanes of a single-lane PHY would be the one lane, designated lane 0.
 Delete PICS item F9
 Change the Value/Comment text of PICS item F10 from 'SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes' to 'Global_PMD_signal_detect is an indicator of the presence of an optical signal on all lanes'.

Cl 181 **SC 181.12.4.1** **P528** **L3** # **R1-252**
 Law, David Hewlett Packard Enterprise
Comment Type **T** **Comment Status** **A** **PICS (Bp) (O)**
 PICS item F10 'Global Signal Detect function', referencing subclause 181.5.4, says 'Report to the PMD service interface the message PMD:IS_SIGNAL.indication (SIGNAL_DETECT)' and item F11 'Global Signal Detect behavior', also referencing subclause 181.5.4, says SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes'.
 I don't think this is correct, as the Global_PMD_signal_detect variable defined in subclause 181.5.4 'PMD global signal detect function' is only used by the MDIO registers, with the PMD:IS_SIGNAL.indication primitive generated by the RTS function.
SuggestedRemedy
 Delete PICS item F10 and change the Value/Comment text of PICS item F11 from 'SIGNAL_DETECT is a global indicator ...' to read 'The Global_PMD_signal_detect variable is a global indicator ...'.
Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 Implemented the suggested remedy with editorial license.

CI 182 SC 182.12.4.1 P561 L9 # R1-253

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status A PICS (B) (O)

PICS item F9 'Global Signal Detect function', referencing subclause 182.5.4, says 'Report to the PMD service interface the message PMD:IS_SIGNAL.indication (SIGNAL_DETECT)' and item F10 'Global Signal Detect behavior', also referencing subclause 182.5.4, says SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes'.

I don't think this is correct, as the Global_PMD_signal_detect variable defined in subclause 182.5.4 'PMD global signal detect function' is only used by the MDIO registers, with the PMD:IS_SIGNAL.indication primitive generated by the RTS function.

In addition, doesn't 200GBASE-DR1-2 PMD have only one lane, a 400GBASE-DR2-2 PMD have only two lanes, but a 1.6TBASE-DR8-2 PMD have eight?

SuggestedRemedy

Delete PICS item F9 and change the Value/Comment text of PICS item F10 from 'SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes' to read 'Global_PMD_signal_detect is an indicator of the presence of an optical on all lanes, or lane 0 for a 200GBASE-DR1-2 PMD.

Response Response Status C

ACCEPT IN PRINCIPLE.

The comment addresses an error in the draft. However, it is sufficient to use "all lanes" for any of the PMD types since all lanes of a single-lane PHY would be the one lane, designated lane 0.

Delete PICS item F9

Change the Value/Comment text of PICS item F10 from 'SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes' to 'Global_PMD_signal_detect is an indicator of the presence of an optical signal on all lanes'.

CI 183 SC 183.12.4.1 P592 L7 # R1-254

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status A PICS (B) (O)

PICS item F10 'Global Signal Detect function', referencing subclause 183.5.4, says 'Report to the PMD service interface the message PMD:IS_SIGNAL.indication (SIGNAL_DETECT)' and item F11 'Global Signal Detect behavior', also referencing subclause 183.5.4, says SIGNAL_DETECT is a global indicator of the presence of optical signals on all four lanes'.

I don't think this is correct, as the Global_PMD_signal_detect variable defined in subclause 183.5.4 'PMD global signal detect function' is only used by the MDIO registers, with the PMD:IS_SIGNAL.indication primitive generated by the RTS function.

SuggestedRemedy

Delete PICS item F10 and change the Value/Comment text of PICS item F11 from 'SIGNAL_DETECT is a global indicator ...' to read 'The Global_PMD_signal_detect variable is a global indicator ...'.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implemented the suggested remedy with editorial license.

CI 185 SC 185.11.4.1 P644 L46 # R1-255

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status A (B) (O)

In PICS item F6, the reference to the SIGNAL_DETECT parameter should be to the SIGNAL_OK parameter (see subclause 185.3.1.3.1).

SuggestedRemedy

In PICS item F6, change the text '... the message PMD:IS_SIGNAL.indication (SIGNAL_DETECT)' to read 'the message PMD:IS_SIGNAL.indication (SIGNAL_OK)'.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 186 SC 186.2.1 P649 L31 # R1-256

Law, David Hewlett Packard Enterprise

Comment Type TR Comment Status A (B) (L)

Subclause 186.2.2 '800GBASE-ER1 FEC sublayer service interface' says, 'The SIL function uses information received from the 800GBASE-ER1 PMA via PMA:IS_SIGNAL.indication and information from the received MNT bits (XREF) to determine the status communicated to the SIGNAL_OK value communicated via FEC:IS_SIGNAL.indication. The mapping is as shown in Table 18602.'.

Since the SIL is using the received MNT bits, which are conveyed in the OH field (see Figure 18606), and I assume extracted by the 'OH/FAM processing' function in the 'Demapping' block in Figure 18603 '800GBASE-ER1 FEC functional block diagram', doesn't there need to be a connection from the 'OH/FAM processing' box to the IS_SIGNAL.indication SIL box in Figure 18603?

This seems to be confirmed by page 6 of the contribution 'A proposal to support APSU for 800GBASE-ER1/ER1-20' available at <https://www.ieee802.org/3/dj/public/adhoc/178b/26_0414/nicholl_178b_01_260414.pdf#page=6>, which shows a red line from the 'OH/FAM processing' box to the FEC:IS_SIGNAL.indication primitive.

SuggestedRemedy

Add an additional input from the 'OH/FAM processing' box to the SIL box in the IS_SIGNAL.indication primitive path in Figure 18603 '800GBASE-ER1 FEC functional block diagram'.

Response Response Status W

ACCEPT.

CI 186 SC 186.2.3.5 P656 L22 # R1-257

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status A (B) (L)

In Figure 18606 'Contents of the OH field in eight frame multi-frame', shouldn't the LSB of the CSTAT field be bit 0, not bit 5?

SuggestedRemedy

Change '5' above the LSB of the CSTAT field in Figure 18606 to read '0'.

Response Response Status C

ACCEPT.

CI 187 SC 187.11.4.1 P720 L46 # R1-259

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status A (B) (O)

In PICS item F6, the reference to the SIGNAL_DETECT parameter should be to the SIGNAL_OK parameter (see subclause 185.3.1.3.1).

SuggestedRemedy

In PICS item F6, change the text '... the message PMD:IS_SIGNAL.indication (SIGNAL_DETECT)' to read 'the message PMD:IS_SIGNAL.indication (SIGNAL_OK)'.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 178B SC 178B.5 P876 L42 # R1-260

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status A (Bp) (CA)

Subclause 178B.5 'RTS and ILT functions within an interface' says 'The RTS function uses inputs from the adjacent interface (via the service interface), its peer interface (via the ILT function), and its per-interface ILT function to permit the ILT function to transition to DATA mode.'.

My understanding is that the inputs from the adjacent interface (via the service interface) is the SIGNAL_OK parameter of the IS_SIGNAL.request primitive from the interface above the PMA to the adjacent interface below the PMA, and the SIGNAL_OK parameter of the IS_SIGNAL.indication primitive from the interface below the PMA to the adjacent interface above the PMA. In other words, this condition is communicated 'downward' via IS_SIGNAL.request and communicated 'upward' via IS_SIGNAL.indication.

Isn't it possible, however, for the Signal indication logic (SIL) in a sublayer in the path between adjacent interfaces to modify the SIGNAL_OK parameter of the IS_SIGNAL primitive communicated between adjacent interfaces, for example the Clause 176 Physical Medium Attachment (PMA) sublayer with RS-FEC symbol multiplexing (see Figure 176012 and Tables 17605 and 17606) and Clause 177 Inner Forward Error Correction Sublayer (see Figure 17702).

As a result, isn't the SIL in the sublayers between adjacent interfaces, if present, also part of APSU and used as an input to enable the ILT function to transition to DATA mode?

SuggestedRemedy

In subclause 178B.5, change the text 'The RTS function uses inputs from the adjacent interface (via the service interface) ...' to read 'The RTS function uses inputs from the adjacent interface, including any SIL between (via the service interface) ...'.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.

CI 180 SC 180.9.6.1 P480 L45 # R1-268

Swenson, Norman Nokia Corporation,Norman Swenson Consulting,Point

Comment Type ER Comment Status R (withdrawn) (O)

The test says "TDECQ is measured with all receive lanes in operation using pattern 3 or 5 (see Table 180-13)." The purpose of this is not clear. This relates to unsatisfied rejected comment I-388 from D3.0.

SuggestedRemedy

Change to: "TDECQ is measured with all receive lanes in operation using pattern 3 or 5 (see Table 180-13) in order to subject the optical lane under test to possible crosstalk interference."

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI FM SC FM P11 L3 # R1-270

Dawe, Piers J G NVIDIA

Comment Type E Comment Status A (B) (CG)

Amendment:

SuggestedRemedy

Amendment 13,

Response Response Status C

ACCEPT.

CI 180 SC 180.1 P462 L6 # R1-271

Dawe, Piers J G NVIDIA

Comment Type ER Comment Status R PHY tables (B) (CG)

D3.0 comment 417 which was misunderstood: Table 180-1 and 2, Physical Layer clauses associated with... are clones of each other, and they don't fit on a single page. Each really has three columns. The status (optional, required or conditional) is the same in each. But the presentation obscures the very high level of commonality. Also it is inaccurate: there is no "Clause 117--400 Gb/s RS" for example; Clause 117 is for both 200 Gb/s and 400 Gb/s operation. Really, we are indicating what is relevant in the clause, not which clause we mean, so it should be in a separate column from the clause number.

SuggestedRemedy

Present these two tables as a single table with four columns: Clause number, 200GBASE-DR1 (with the abbreviated titles from Table 180-1), 400GBASE-DR2 (with the abbreviated titles from Table 180-2), Status.

Combine footnotes c and e.

Follow Table 167-2, not Table 122-1 which inefficiently interleaves rows from two tables.

Make similar improvements in other clauses

Response Response Status W

REJECT.

This comment is re-submission of comments I-417 and I-418 against D3.0. The responses to the comments may be found in the following report:

https://www.ieee802.org/3/dj/comments/D3p0/8023dj_D3p0_comments_final_id.pdf

This new comment points out a different format than considered in the response to those comments.

Nevertheless, the separate tables as currently in the draft provide clear definition for each of the PMD types defined in the clause without creating a rather dense table combining all four PHY types into a single table. Note also that for many sublayer types multiple rows will be required, e.g., for PCS 119 for 200G/400G, 172 for 800G, 175 for 1.6T. This is also helpful on concise wording in the footnotes. Clause number and "abbreviated" titles are always combined in the same column for previous PMD clauses with rare exceptions; separating the two into separate columns would not be inappropriate but at the same time is not necessary.

CI 180 SC 180.1 P463 L6 # R1-272

Dawe, Piers J G

NVIDIA

Comment Type ER Comment Status R PHY tables (B) (CG)

D3.0 comment 418 which was misunderstood: Table 180-3 and 4, Physical Layer clauses associated with... are not quite clones of each other, and they don't fit on a single page. Each really has three columns. The status (optional, required or conditional) is the same in each. But the presentation obscures the very high level of commonality and makes it hard to spot the differences (PCS and PMA). Also it is inaccurate: there is no "120F--800GAUI-8 C2C" for example; Annex 120F is for many MAC rates. Really, we are indicating what is relevant in the clause, not which clause we mean, so it should be in a separate column from the clause number.

SuggestedRemedy

Present these two tables as a single table with four columns: Clause number, 800GBASE-DR4 (with the abbreviated ~titles from Table 180-3), 1.6TBASE-DR8 (with the abbreviated titles from Table 180-4), Status. There will be one more row than in Table 180-3.

Combine footnote d.

Follow Table 167-2, not Table 122-1 which inefficiently interleaves rows from two tables.

Response Response Status W

REJECT.

Resolved using the response to comment R1-271.

CI 180 SC 180.1 P462 L45 # R1-273

Dawe, Piers J G

NVIDIA

Comment Type ER Comment Status R editorial (Bp) (CG)

These tables of what makes up a particular Physical Layer are not so useful for teaching beginners because they leave out the elephant in the room: the PMD clause. Beginners don't read everything all at once: they have to start somewhere. I know we have omitted this before.

SuggestedRemedy

Add a row:

| 180 | 200GBASE-DR1 PMD | 400GBASE-DR2 PMD | Required |

So the table can stand by itself.

And similarly for other similar tables.

Response Response Status C

REJECT.

This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.

The title of this table says "Table 18001uPhysical Layer clauses associated with the 200GBASE-DR1 PMD", which hints clause 180 and 200GASE-DR1 is required when considering this table. Therefore no need to add a row to point that out. The preceding text and the table title state that the table includes additional sublayers. Furthermore, these tables are consistent with multiple previous generations of PMDs.

CI 180 SC 180.5.1 P467 L44 # R1-289

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status R signal detect (CG)

D3.0 comment 433: This shows the signal detect after the usual AND gate at the bottom of the diagram, but an unconnected SIGNAL_OK at the top of the diagram. But these are connected; the ILT/RTS functions will be asleep until signal detect reports that there is light coming in and it is worth waking up. A consideration of squelch shows that getting this right can be important. Optical signal detect protects the DSP from processing crosstalk (successfully or not) when there is no input, and it definitively keeps the receiver from getting confused if the light has disappeared and confusing those debugging the network. For these purposes it does not matter that it is slow, nor that it doesn't identify a good signal; it unambiguously identifies a too-weak or no signal. Every optical clause has had this for a long time; 187 for example still does, in the traditional way. But there might be implementations where delivering the signal detect information to the right place in RTS is impractical.

SuggestedRemedy

Show signal detect as a recommended input to "ILT/RTS functions". Several clauses.

Response Response Status U

REJECT.

This comment is a submission of comment I-436 against Draft 3.0.

Resolved using the response to comment R1-290.

CI 180 SC 180.5.4 P468 L48 # R1-290

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status R signal detect (CG)

D3.0 comment 436: global signal detect should gate RTS. It would be advisable for the lane-by-lane signal detect to gate ILT training (no light = nothing to train on): see another comment.

SuggestedRemedy

Add sentence that Global_PMD_signal_detect should (recommended) be used as an input to the RTS function of 178A. Several optical clauses.

Response Response Status U

REJECT.

This comment is a restatement of comment I-436 against Draft 3.0.

This comment refers to another comment ("see another comment"), likely R1-289.

IEEE 802.3 is an interoperability specification, not an implementations specification.

Although use of the signal detect variable might be helpful in determining the state of the input signal it is not necessary to mandate or recommend the use of that variable for the purposes listed in the comment.

This clause defines Global_PMD_signal_detect only as a management variable and consequently bits in a management register. Use beyond that is not defined. The quality of a received optical signal is determined by the receiver. The means by which a receiver determines the quality of the optical signal is beyond the scope of this standard, though it might include use of the Global_PMD_signal_detect variable.

CI 178B SC 178B.6 P878 L46 # R1-291

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status R Signal detect (CA)

D3.0 comment 433 and others: signal detect should gate RTS. RTS should not move to DATA mode if no light is coming in, whether or not a retimer has locked its clock to something.

SuggestedRemedy

Add text that for an optical PMD or PMD/PMA, local_rts should not be set to true if signal detect indicates that there is no optical input.

Response Response Status W

REJECT.

The resolution to comments R1-289 and R1-290 determined that signal detect would not be explicitly specified as a recommended input to the ILT and RTS functions.

There is no consensus to make the proposed changes.

CI 178B SC 178B.7.2 P880 L1 # R1-292

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status R Signal detect (CA)

D3.0 comment 433 and 436: a receiving PMD or PMA should not claim all is well if no light is coming in.

SuggestedRemedy

Add text here and possibly in 178B.8.3 saying that if the lane-by-lane signal detect is 0, per-lane ISL should (recommended) not move to mission mode or stay there (although it may transmit onto the line).

Response Response Status W

REJECT.

The resolution to comments R1-289 and R1-290 determined that signal detect would not be explicitly specified as a recommended input to the ILT and RTS functions.

There is no consensus to make the proposed changes.

CI 178B SC 178B.7 P879 L41 # R1-293

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status R Signal detect (CA)

This says "Recovery from the ISL_FAIL state in the training control state diagram (Figure 178Bû10b) requires management to assert mr_restart_training or reset; the timing of this action is implementation dependent and beyond the scope of this standard" which sounds permanent or at least aggravating.

SuggestedRemedy

I wonder if this should say that if the link was up and signal_detect transitions from OK to not, the state diagram should be restarted, or whether it should stay down until the return of the optical signal causes something else to restart it.

Response Response Status W

REJECT.

The resolution to comments R1-289 and R1-290 determined that signal detect would not be explicitly specified as a recommended input to the ILT and RTS functions.

There is no consensus to make the proposed changes.

CI 174A SC 174A.9.6 P753 L1 # R1-300

Dawe, Piers J G

NVIDIA

Comment Type ER Comment Status A (B) (CG)

D3.0 comment 421 (174A.9 is not as user-friendly as it should be): I think it has been noted before that the order of subclauses here does not represent their contents. 174A.9.5, Error mask test method using PMA measurements, says "If this test fails, then the performance may be further verified using the method in 174A.9.6 or 174A.9.7." 174A.9.7, BLER method for a single lane using PMA measurements, says "ratio.If this test fails, then the performance may be further verified using the method in 174A.9.6." 174A.9.6, BLER method for all lanes using PMA measurements, doesn't: it's the end of the line.

SuggestedRemedy

Swap 174A.9.6 and 174A.9.7.
Insert a space after "ratio."
Improve the subclause titles to match their contents and relate to each other:
174A.9.5--Error mask test method *for each lane* using PMA measurements
174A.9.7 to be 6--BLER method for *each* lane using PMA measurements
174A.9.6 to be 7--BLER method for all lanes using PMA measurements
or
174A.9.5--*Lane-by-lane* error mask test method using PMA measurements
174A.9.7 to be 6--*Lane-by-lane* BLER method for using PMA measurements
174A.9.6 to be 7--BLER method for all lanes using PMA measurements

Response Response Status W

ACCEPT IN PRINCIPLE.
This comment does not apply to the substantive changes between IEEE P802.3dj D3.0 and D3.1 or the unsatisfied negative comments from previous drafts. Hence it is not within the scope of the recirculation ballot.
However, the changes proposed in the suggested remedy are improvements to the draft.
On page 753, line 27 add a space between "ratio." and "If".
Change the title of 174A.9.5 to "Error mask test method for each lane using PMA measurements"
Change the title of 174A.9.7 to "BLER method for each lane using PMA measurements"
Swap the order of 174A.9.6 and 174A.9.7.
Implement with editorial license.

CI 180 SC 180.9.6.3 P482 L18 # R1-301

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status A TDECQ variable (B) (O)

The notation seems inconsistent. We have z_n and x(n); both seem to be series, or an element in a series, but they are written differently.

SuggestedRemedy

Remove the unnecessary algebra and clean up the remaining notation.

Response

Response Status W

ACCEPT IN PRINCIPLE.
Resolved using the response to comment R1-94 and R1-114.

CI 180 SC 180.3 P465 L5 # R1-302

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status A service interface (B) (O)

This language "between the PMD and the PMD client" and "receives signal status information from the client sublayer" is arcane and obfuscatory (and not consistent). "Client" is not defined, and not in the vocabulary of the analog engineers who should be reading this clause. It may be needed for the generalised "MAC client" but for each PMD type, there is only one "client" type: PMA or Inner FEC. 174.3.1 uses much more palatable language: "the next higher sublayer".

SuggestedRemedy

In this clause, change "the PMD client" to "the PMA immediately above the PMD". Change "the client sublayer" to "the PMA". Make similar changes in other clauses.

Response

Response Status W

ACCEPT IN PRINCIPLE.
In 180.3 the term client appears twice. The term "client sublayer" is commonly used in the base standard to refer to the sublayer immediately above a sublayer. The term "the PMA immediately above the PMD" is a rather large mouthful to repeat especially multiple times. However, it would be helpful to properly introduce the term where it is used and be consistent in terminology.
On page 465 line 5, change "PMD client" to "PMD client (PMA immediately above the PMD)"

On page 465 line 20 change "client sublayer" to "PMD client".
Apply the same changes to 181.3, 178.4, and 179.4.
Apply the same changes to 182.3 and 183.3, except replace "PMA" with "Inner FEC".
Implement with editorial license.

EE P802.3dj D3.1 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet 1st SA recirculation ballot comment

CI 180 SC 180.3 P465 L20 # R1-303

Dawe, Piers J G

NVIDIA

Comment Type TR Comment Status A service interface (B) (O)

This has been changed from "the status" to "signal status information" but it is not clear which signal: it might be the "data" signal that the PMA is sending to the PMD, or the one the PMA is receiving from the PMD, or something else. Following a reference above to 174.3 led me to 174.3.1 "The IS_SIGNAL.request primitive is used to define the transfer of signal status to a sublayer from the next higher sublayer" which doesn't seem right: the primitive should transfer something, not define the transfer of something. And still, no indication of which signal. 174.3.3 leads to 116.3.3. 116.3.3.4 gets to the point.

SuggestedRemedy

Back in 180.3, say which signal, and because SIGNAL.request is such an oddball, provide a cross-reference to 116.3.3.4. Make related changes as appropriate.

Response Response Status W

ACCEPT IN PRINCIPLE.
Since the PMD:IS_SIGNAL.request primitive accompanies the PMD:IS_UNIT_DATA.request primitive, it is implied that it relates to the signal in the transmit direction through the client sublayer (a PMA sublayer in this case).
A detailed definition of the PMD:SIGNAL.request primitive is provided in 116.3.3.4. A direct reference would be help. Similarly, a reference to 116.3.3.3 would be helpful for the PMD:IS_SIGNAL.indication primitive.
On page 465 line 15 change "PMD:IS_SIGNAL.indication primitive" to "PMD:IS_SIGNAL.indication primitive (see 116.3.3.3)".
On page 465 line 20 change "PMD:IS_SIGNAL.request primitive" to "PMD:IS_SIGNAL.request primitive (see 116.3.3.4)".
Apply similar changes to 178.4, 179.4, 181.3, 182.3, and 183.3.
Implement with editorial license.

CI 169 SC 169.8 P221 L50 # R1-310

Opsasnick, Eugene

Broadcom Inc.

Comment Type E Comment Status A (B) (CG)

The editing instruction says to change 169.6, but is located in section 169.8

SuggestedRemedy

Change "169.6" to 169.8" in the first line of 169.8.

Response Response Status C

ACCEPT.

CI 169 SC 169.8 P221 L53 # R1-311

Opsasnick, Eugene

Broadcom Inc.

Comment Type E Comment Status A (B) (CG)

The newly inserted text in this paragraph is not underlined.

SuggestedRemedy

Underline the inserted text around "and Clause 176 through Clause 187".

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement the suggested remedy with editorial license.