Cl **FM**   *SC* **FM**   *P* **1**   *L*   # 447

Carlson, Steve   HSD, Bosch, Ethernovia

Comment Type **E**   *Comment Status* **D**   *EZ*

The FrameMaker template has been updated to Version 5.1 by Pete Anslow.

SuggestedRemedy

Update the template to Ver. 5.1 per Anslow
http://www.ieee802.org/3/tools/framemaker/index.html

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM**   *SC* **FM**   *P* **7**   *L* **17**   # 372

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

WG ballot group is now known.

SuggestedRemedy

Add WG ballot group.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM**   *SC* **FM**   *P* **11**   *L* **3**   # 395

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

The expansion for PMA is physical medium attachment per 802.3-2022 1.5.

SuggestedRemedy

Change: Physical Media Attachment (PMA)
To: Physical Medium Attachment (PMA)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM**   *SC* **FM**   *P* **11**   *L* **10**   # 660

Murty, Ramana   Broadcom

Comment Type **E**   *Comment Status* **D**   *EZ*

Text in Amendment 3

SuggestedRemedy

There is no abbreviation (PHY) in 802.3db. Add a comma after "two" on line 11.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Copy the official text for 802.3db.

Cl **FM**   *SC* **FM**   *P* **11**   *L* **10**   # 396

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

The description of db doesn't match D3.2 of P802.3db. PHY is not the correct abbreviation as it means "Physical Layer device". Also, two oxford commas are missing.

SuggestedRemedy

Change: Physical Layer (PHY) specifications and management parameters for 100, 200 and 400 Gb/s over one, two and four pairs of multimode fiber based on 100 Gb/s optical signaling.
To: Physical Layer specifications and management parameters for 100, 200, and 400 Gb/s over one, two, and four pairs of multimode fiber based on 100 Gb/s optical signaling.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM**   *SC* **FM**   *P* **11**   *L* **22**   # 397

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

The description of de doesn't match D3.1 of P802.3de.

SuggestedRemedy

Change: Single Pair
To: Single-Pair

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **FM**
SC **FM**

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8/15/2022 3:27:56 PM

Cl **FM**   *SC* **FM**   *P* **11**   *L* **30**   # 398

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

The description of cx doesn't match D3.0 of P802.3cx.

SuggestedRemedy

Change: transmit and receive path delays
To: transmit and receive path data delays

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **FM**   *SC* **FM**   *P* **20**   *L* **48**   # 449

Carlson, Steve   HSD, Bosch, Ethernovia

Comment Type **E**   *Comment Status* **D**   *EZ*

Editor's note is woefully out of date. Example projects are a decade old: (e.g., IEEE P802.3bj and IEEE P802.3bk)

SuggestedRemedy

Change to (e.g., IEEE P802.3cx and IEEE P802.3cz)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **00**   *SC* **0**   *P* **0**   *L* **0**   # 346

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ*

Many errors in editorial instructions throughout this draft. These are a mess and rather painful to comment on one by one.

SuggestedRemedy

Please review all editorial instructions and ensure that that are consistent with the rules and common style. Consult editorial instructions paragraph on page 20 line 33 and consult 802.3bs, 802.3ck, etc., for examples. Most have been pointed out in other comments, but likely several have not.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The Editor will review the editorial instructions and make changes as needed; however, as no specific suggested remedy was provided, it is not clear what will satisfy the commenter.

Cl **00**   *SC* **0**   *P* **0**   *L* **0**   # 455

D'Ambrosia, John   Futurewei, US Subsidiary of Huawei

Comment Type **E**   *Comment Status* **D**   *EZ*

The terms master/slave should be avoided.

SuggestedRemedy

Consult with IEEE SA for acceptable terms and replaced

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Topic was addressed already in TF review under comment #293 against D1.3, where reference to Annex K was inserted in Clause 165.

Cl **1**   *SC* **1.4.128a**   *P* **21**   *L* **8**   # 373

Grow, Robert   RMG Consluting

Comment Type **TR**   *Comment Status* **D**

An Ethernet network is not full duplex, though it may include full duplex links. Similarly, an Ethernet network may include multiple data rates in the collective set of its physical layer links. This error is similar to some of the PHY Type definitions that exist in approved P802.3/D3.2, but should not be replicated. 1.4.14 1000BASE-T1 does not include a description of the "network"; but 1.4.82 10GBASE-T1 seems to be the model for this definition (thus replicating an error).

SuggestedRemedy

IEEE 802.3 Physical Layer specification for a 25 Gb/s Ethernet link using a single twisted-pair copper cable.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change

IEEE 802.3 Physical Layer specification for a 25 Gb/s Ethernet link using a single twisted pair copper cable.

To

IEEE 802.3 Physical Layer specification for a 25 Gb/s Ethernet link using a single balanced pair of conductors.

Recent automotive and industrial Ethernet projects have deprecated "twisted-pair copper cable." See comment #475.

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

Cl **1**   *SC* **1.4.128a**   Page 2 of 77
8/15/2022 3:27:56 PM

Cl **1**   *SC* **1.4.407**   *P* **21**   *L* **11**   # 343

Brown, Matt   Huawei

Comment Type **E**   *Comment Status* **D**   *EZ*

Editorial instruction is superfluous as changes are evident by the change marking.

SuggestedRemedy

Change to "Change 1.4.407 as follows:"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **1**   *SC* **1.4.473**   *P* **21**   *L* **16**   # 383

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *EZ*

No editing intruction for 1.4.473

SuggestedRemedy

Add "Change 1.4.473 as follows:"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **1**   *SC* **1.4.473**   *P* **21**   *L* **17**   # 344

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ*

No editorial instruction.

SuggestedRemedy

Add editorial instruction here and in various other locations in this draft including 105.1.1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **1**   *SC* **1.4.473**   *P* **21**   *L* **17**   # 475

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

If we are going to change 'twisted pair' to 'conductor pair' here, we need to also change the same change in the matching definition of PoDL PD.

SuggestedRemedy

Add 1.4.472 PoDL PD to the draft, changing "twisted" to "conductor" as shown:
1.4.472 PoDL PD: A Powered Device that is intended to receive power from a link section consisting of a
single </SO>twisted</SO></UL>conductor</UL> pair. (See IEEE Std 802.3, Clause 104.)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **1**   *SC* **1.5.3**   *P* **37**   *L* **25**   # 369

Grow, Robert   RMG Consluting

Comment Type **TR**   *Comment Status* **D**

If 25GBASE-T1 deserves its own protocol stack in Figure 105-1, then it should describe those sublayers in the relevant 105.3.x subclauses. I missed this and should have voted no on advancement to WG ballot as the draft is not technically complete. I should have seen these titles with no associated changes as an indication of incompleteness.

SuggestedRemedy

The technical experts in the TF are much better qualified than I am to provide the missing text for the 25GBASE-T1 protocol stack relevant sections. Delete the subclause titles not relevant to the 25GBASE-T1 protocol stack. Include editorial instructions for each of the remaining subclauses.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove 105.3.1 through 105.3.5

Cl **30**   *SC* **30.3.2.1.2**   *P* **15**   *L* **15**   # 399

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

The PHY type needs to be moved right and then there should be space before the description.

SuggestedRemedy

Add spaces in "25GBASE-T1 Clause 165 25 Gb/s PAM4" to match 802.3-2022 spacing.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **30**   Page 3 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **30.3.2.1.2**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **30** *SC* **30.3.2.1.3** *P* **15** *L* **21** # 400

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **D** *EZ*

The PHY type needs to be moved right and then there should be space before the description.

SuggestedRemedy

Add spaces in "25GBASE-T1 Clause 165 25 Gb/s PAM4" to match 802.3-2022 spacing.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **15** *L* **35** # 401

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **D** *EZ*

The PHY type needs to be moved right and then there should be space before the description.

SuggestedRemedy

Add spaces in "25GBASE-T1 Single balanced pair of conductors PHY as specified in Clause 165" to match 802.3-2022 spacing.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.6.1.1.5** *P* **15** *L* **49** # 402

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **D** *EZ*

The PHY type needs to be moved right and then there should be space before the description.

SuggestedRemedy

Add spaces in "25GBASE-T1 as specified in Clause 165" to match 802.3-2022 spacing.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.3** *P* **28** *L* **1** # 334

Maguire, Valerie Copperopolis

Comment Type **E** *Comment Status* **D** *EZ*

The PICS subclause for clause 45 is 45.5.

SuggestedRemedy

Replace, "45.3" with "45.5" and re-number subsequent subclauses in this clause accordingly.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.3** *P* **28** *L* **2** # 335

Maguire, Valerie Copperopolis

Comment Type **E** *Comment Status* **D** *EZ*

Interface is capitalized when appearing after "MDIO" (see clause 45 header).

SuggestedRemedy

Replace, "Input/Output (MDIO) interface" with "Input/Output (MDIO) Interface" (this may need to be a maintenance rquest)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1** *P* **23** *L* **7** # 374

Grow, Robert RMG Consluting

Comment Type **E** *Comment Status* **D** *EZ*

I find no changes or inserts in the partial content copied from P802.3/D3.2. (Nor an editor's note explaining why the content is in the draft and that it should be removed prior to publication.)

SuggestedRemedy

Delete lines 7 through 20.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **45** Page 4 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **45.2.1** 8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1**   *P* **23**   *L* **7**   # 504
Huber, Thomas   Nokia
Comment Type   **E**   *Comment Status* **D**   *EZ*
It is not clear why Table 45-3 and the text that introduces it are included here, since there is no change being made.

SuggestedRemedy
Remove everything between the heading 45.2.1 and the heading 45.2.1.7

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1**   *P* **23**   *L* **8**   # 386
Marris, Arthur   Cadence Design Systems
Comment Type   **ER**   *Comment Status* **D**   *EZ*
Why is Table 45–3 included if there are no changes?

SuggestedRemedy
Delete Table 45–3

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1**   *P* **23**   *L* **9**   # 476
Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve
Comment Type   **E**   *Comment Status* **D**   *EZ*
There are no edits to Table 45-3 or 45.2.1, and text of the complete section or complete table are not shown. These should not be in the draft, as they do not match the base standard and also contain no edits.

SuggestedRemedy
Delete 45.2.1 text (but not the section header) and Table 45-3 from the draft.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.7.4**   *P* **23**   *L* **34**   # 375
Grow, Robert   RMG Consluting
Comment Type   **E**   *Comment Status* **D**   *EZ*
Inserted text should be underlined.

SuggestedRemedy
Underline line 34.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.7.5**   *P* **23**   *L* **51**   # 376
Grow, Robert   RMG Consluting
Comment Type   **E**   *Comment Status* **D**   *EZ*
Inserted text should be underlined.

SuggestedRemedy
Underline line 51.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.16**   *P* **24**   *L* **3**   # 404
Wienckowski, Natalie   General Motors
Comment Type   **E**   *Comment Status* **D**   *EZ*
Only 1 new row is being added.

SuggestedRemedy
Change: insert new rows
To: insert new row

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line
Cl **45**
SC **45.2.1.16**
Page 5 of 77
8/15/2022 3:27:56 PM

Cl **45**   *SC* **45.2.1.214**   *P* **24**   *L* **30**   # 403

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

The editorial instruction doesn't reference the new row added.

SuggestedRemedy

Change: Change the identified row in Table 45-178 as follows (unchanged rows not shown):
To: Change the identified row in Table 45-178 and insert a new row immediately below the changed row as follows (unchanged rows not shown):

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.214.2**   *P* **25**   *L* **11**   # 377

Grow, Robert   RMG Consluting

Comment Type **TR**   *Comment Status* **D**

When looking to see if the PICS needed to be updated for the changed bit behavior, I couldn't find a PICS item corresponding to this existing shall.

SuggestedRemedy

Delete the shall, or add PICS item for the specified behavior.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Not all SHALL statements in Clause 45 have respective PICS. Since this is an existing SHALL statement and does not have a PICS in IEEE Std 802.3-2022, I would prefer to make no changes that would / could affect other projects and PHYs.

Cl **45**   *SC* **45.2.1.244**   *P* **25**   *L* **19**   # 654

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

Table number doesn't match the editor instruction

SuggestedRemedy

change Table 45-179 to 45-206

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.244**   *P* **25**   *L* **19**   # 387

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *EZ*

Table number should be 45-206

SuggestedRemedy

Change "Table 45–179" to "Table 45–206". Similar issue for Table 45-207 on page 26

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.244.1**   *P* **25**   *L* **43**   # 653

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

missing references to Clause 165

SuggestedRemedy

change "Reed-Solomon interleaving is
described in 149.3.2.2.15. This is communicated to the link partner via Infofields as specified in 149.4.2.4.5."
to "Reed-Solomon interleaving is
described in 149.3.2.2.15 for MultiGBASE-T1 and and 165.3.2.2.15 for 25GBASE-T1. This is communicated to the link partner via Infofields as specified in 149.4.2.4.5 for MultiGBASE-T1 and and 165.4.2.4.5 for 25GBASE-T1."
make the same correction on page 26 lin 26

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.245**   *P* **26**   *L* **1**   # 655

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

Table number doesn't match the editor instruction

SuggestedRemedy

change Table 45-180 to 45-207

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 6 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **45.2.1.245**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.245**   *P* **26**   *L* **1**   *#* 378

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

    Table number error, it is Table 45-207 in P802.3/D3.2.

SuggestedRemedy

    Correct table number per comment.

Proposed Response   *Response Status* **W**

    PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.245.1**   *P* **26**   *L* **29**   *#* 379

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

    I don't find it in the style manual, but I believe the preference is that "and" should be preceded by an "Oxford" comma.

SuggestedRemedy

    "L=2, L=4, and L=8" (retaining underscore and strikethrough).

Proposed Response   *Response Status* **W**

    PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   *#* 492

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ*

    Subclause 45.2.1.246 and its 4 subclauses do not appear to be changed by this amendment

SuggestedRemedy

    Remove 45.2.1.246 and its subclauses

Proposed Response   *Response Status* **W**

    PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   *#* 388

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *EZ*

    Why is 45.2.1.246 included if nothing has been changed?

SuggestedRemedy

    Delete 45.2.1.246

Proposed Response   *Response Status* **W**

    PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   *#* 478

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

    There are no edits to PICS in clause 45 required in the draft - i.e., section 45.3 (or subclauses) and no editing instructions.

SuggestedRemedy

    Delete 45.3 and subclauses, including headers, from the draft

Proposed Response   *Response Status* **W**

    PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   *#* 380

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

    Text with no changes. (Nor editorial note to explain why the content is in the draft and that it should be removed prior to publication.)

SuggestedRemedy

    Delete page 26, line 35 through page 27, line 43

Proposed Response   *Response Status* **W**

    PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 7 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **45.2.1.246**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   # 516

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

There is no editorial instruction nor any indication of changes in the text in 45.2.1.246 and its subclauses.

SuggestedRemedy

Remove 45.2.1.246 through 45.2.1.246.4 from the draft.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   # 604

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

all of subclause 45.2.1.246 (including table 45-181) appear identical to the base 802.3-2022 standard except that the table number should be 45-208

SuggestedRemedy

remove all of subclause 45.2.1.246 or at least change Table 45-181 to Table 45-208

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246**   *P* **26**   *L* **35**   # 477

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

There are no edits to Section 45.2.1.246 (or subclauses) in the draft and no editing instructions.

SuggestedRemedy

Delete 45.2.1.246 and subclauses, including headers, from the draft

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246.1**   *P* **26**   *L* **43**   # 600

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

missing references to Clause 165

SuggestedRemedy

change "Transmitter test mode operations defined by bits 1.2313.15:13, are described in 149.5.1 and Table149–17."
to "Transmitter test mode operations defined by bits 1.2313.15:13, are described in 149.5.1 and Table 149–17 for MultiGBASE-T1 and 165.5.1 and Table 165–11 for 25GBASE-T1"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246.2**   *P* **26**   *L* **51**   # 601

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

missing references to Clause 165

SuggestedRemedy

change "149.3.2.2.20."
to "149.3.2.2.20 for MultiGBASE-T1 and 165.3.2.2.20 25GBASE-T1."
make the same correction on page 27 line 35

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.2.1.246.4**   *P* **27**   *L* **42**   # 602

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

missing references to Clause 165

SuggestedRemedy

change "See 149.5.2.3.1 and 149.5.2.3.2 for more information."
to "See 149.5.2.3.1, 149.5.2.3.2, 165.5.2.3.1 and 165.5.2.3.2 for more information."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 8 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **45.2.1.246.4**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.246**   *P* **26**   *L* **35**   # 407

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   *EZ*

Unchanged register definitions don't need to be included in the spec.

SuggestedRemedy

Remove this Subclause and 45.2.1.246.x as no changes have been made from the base standard.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.3**   *P* **28**   *L* **1**   # 607

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

I see no differences between this subclause and the base 802.3-2022

SuggestedRemedy

remove all of subclause 45.3 if no changes are made to this subclause

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove all of subclause 45.3

Cl **45**   *SC* **45.3**   *P* **28**   *L* **1**   # 605

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

Clause 45 PICs in the 802.3-2022 base standard is 45.5

SuggestedRemedy

change 45.3 to 45.5 and associated subclauses

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove all of subclause 45.3, there are no changes made in P802.3cy

Cl **45**   *SC* **45.3**   *P* **28**   *L* **1**   # 517

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

There is no editorial instruction nor any indication of changes in the text in 45.3 (PICS). The draft includes the content up to 45.3.2.3 (without any changes) but omits the rest of the PICS.

SuggestedRemedy

If there are no changes to the PICS, remove 45.3 from the draft.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove 45.3 from the draft.

Cl **45**   *SC* **45.3**   *P* **28**   *L* **1**   # 493

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ*

Subclause 45.3 (and its subclauses) are shown in the draft as the PICS, but the PICS is clause 45.5 in the published 802.3, and in any case there are no changes compared to 802.3-2022.

SuggestedRemedy

Remove subclause 45.4 and its subclauses

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **45**   *SC* **45.3**   *P* **28**   *L* **6**   # 336

Maguire, Valerie   Copperopolis

Comment Type **E**   *Comment Status* **D**   *EZ*

Interface is capitalized when appearing after "MDIO" (see clause 45 header).

SuggestedRemedy

Replace, "MDIO interface" with "MDIO Interface" (this may need to be a maintenance rquest)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 9 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **45.3**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45** *SC* **45.3.2.2** *P* **28** *L* **36** # 606

McClellan, Brett Marvell

Comment Type **E** *Comment Status* **D** *EZ*

IEEE Std 802.3-2022 is the new base document

SuggestedRemedy

change multiple references to IEEE Std 802.3-202x to IEEE Std 802.3-2022

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **78** *SC* **78.1.4** *P* **30** *L* **8** # 345

Brown, Matt Huawei

Comment Type **E** *Comment Status* **D** *EZ*

Editorial instruction not correct. Row in table is inserted not changed.

SuggestedRemedy

Change "unchanged rows not shown" to "some rows not shown".
Same for 78.2.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Leave the instructions as they are, but underline newly inserted rows.

Cl **78** *SC* **78.2** *P* **30** *L* **22** # 608

McClellan, Brett Marvell

Comment Type **E** *Comment Status* **D** *EZ*

25GBASE-T1 should appear before 25GBASE-T in Table 78-2, per pattern set in the baseline

SuggestedRemedy

change editor instruction to: Insert a row for 25GBASE-T1 before 25GBASE-T in Table 78–2

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **78** *SC* **78.3** *P* **30** *L* **43** # 479

Zimmerman, George CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T** *Comment Status* **D**

"The EEE capability for 25GBASE-T1 shall be advertised during link training according to 165.4.2.4.10." has two problems. First, the advertisement not described in 165.4.2.4.10 (that is where link training is, but not the advertisement). The advertisement is in 165.4.2.4.5 (you could say 165.4.2.4 because it contains the full infofield function)
The second problem is that this is a duplicate shall with the advertisement shall in clause 165.4.2.4.5: "EEEen and OAMen indicate EEE and 25GBASE-T1 OAM capability enable, respectively. The PHY shall indicate the support of these two optional capabilities by setting the corresponding capability bits."
*it turns out these are also problems with the entries for 2.5G/5G/10GBASE-T1...

SuggestedRemedy

Change "shall be advertised" to "is advertised" on P30 L43, and change 165.4.2.4.10 to 165.4.2.4.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **78** *SC* **78.3** *P* **30** *L* **43** # 518

Ran, Adee Cisco

Comment Type **E** *Comment Status* **D** *EZ*

The editorial instruction here is "insert", so the text should not be underlined.
However, it may be preferable to unclude the whole paragraph and use "change".

SuggestedRemedy

Include the whole paragraph and use the "change" editorial instruction.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change the text format and remove underline.

Cl **78** *SC* **78.3** *P* **30** *L* **49** # 480

Zimmerman, George CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E** *Comment Status* **D** *EZ*

Missing period at the end of the sentence to be edited.

SuggestedRemedy

Add a period after "Auto-Negotiation"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **78** Page 10 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **78.3** 8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **78**   *SC* **78.3**   *P* **30**   *L* **49**   # 609

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

missing period

SuggestedRemedy

change to: Auto-Negotiation.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **30**   *L* **54**   # 481

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

The change made to this paragraph is already in the base standard 802.3-2022. "Case-3 of the PHY in the MultiGBASE-T1 set is the same as Case-1 when Slow Wake is active. Case-4 of the PHY in the MultiGBASE-T1 set is the same as Case-2 when Slow Wake is active." so the edit is unnecessary.

SuggestedRemedy

Delete editing instruction "Modify the 10th paragraph…" on P30 L54, and the text on P31 L1 through 7 for the edit to the text. Retain header for 78.5 and editing instruction and edit to Table

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **1**   # 519

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   *EZ*

The editorial instruction says "Modify the 10th paragraph of 78.5 as follows:"

However, the text in the draft is not the tenth paragraph (which addresses MultiGBASE-T1) but from the seventh paragraph (which addresses MultiGBASE-T).

The tenth paragraph in the 802.3-2022 standard already includes the final two sentences in this amendment (they are defined for 10GBASE-T1); it seems that no change to the text is required.

SuggestedRemedy

Remove the editorial instruciotn and the change to the text.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **2**   # 610

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

the 802.3-2022 base document uses 'link partner' not 'Link Partner'

SuggestedRemedy

change 'Link Partner' to 'link partner' in every occurrence

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **5**   # 494

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ*

The changes indicated for the text of the 10th paragraph are already present in 802.3-2022

SuggestedRemedy

Remove the editing instruction to modify the 10th paragraph.and associated text of the 10th paragraph.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **5**   # 611

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

the 802.3-2022 base document uses 'link partner' not 'Link Partner'

SuggestedRemedy

remove the editor instruction and text

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Seems like a copy of comment #610 with wrong suggested remedy?

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **78**   Page 11 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **78.5**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **78**   *SC* **78.5**   *P* **31**   *L* **9**   # 520

Ran, Adee   Cisco

Comment Type   **E**   *Comment Status* **D**   *EZ*

"Summary of the LPI timing parameters for supported PHYs or interfaces" is Table 78-4, not Table 78-3.

SuggestedRemedy

Change the number in the editorial instruction and the table heading to 78-4.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **9**   # 482

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type   **E**   *Comment Status* **D**   *EZ*

Table 78-3 in this draft is 78-4 in 802.3-2022

SuggestedRemedy

Renumber table 78-3 as 78-4 in both editing instruction and title

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **14**   # 612

McClellan, Brett   Marvell

Comment Type   **E**   *Comment Status* **D**   *EZ*

the 802.3-2022 base document shows this as Table 78-4

SuggestedRemedy

change Table 78-3 to Table 78-4 on lines 9 and 14

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.5**   *P* **31**   *L* **22**   # 521

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status* **D**

The new values in Table 78-3 are given with precision of up to five fractional digits (10 ps resolution). Adding to the two integer digits, this results in seven digits of significance.

The rightmost zero digit indicates that this level of precision is expected (Style manual, 16.3.2: "Only as many significant digits should be used as the precision of data justifies").

The existing values in the table (in 802.3-2022) are mostly with two fractional digits (10 ns resolution) with a single exception of 25GBASE-T which has three (1 ns resolution). In all cases except 2.5GBASE-T1 the number of significant digits is up to 4 (2.5GBASE-T1 has values above 100).

It seems unnecessary to specify and impractical to measure LPI timing delays with a 10 ps resolution.

SuggestedRemedy

Round all the numbers to four digits of significance (three fractional digits for numbers below 10, two for numbers above 10). Omit rightmost zero digits unless it is strictly required.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.6**   *P* **32**   *L* **1**   # 614

McClellan, Brett   Marvell

Comment Type   **E**   *Comment Status* **D**   *EZ*

I see no differences between this subclause and the base 802.3-2022

SuggestedRemedy

remove all of subclause 78.6 if no changes are made to this subclause

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.6**   *P* **32**   *L* **1**   # 483

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type   **T**   *Comment Status* **D**   *EZ*

There are no changes to clause 78 PICS in this draft

SuggestedRemedy

Delete 78.6 and subclauses (P32 L1 - P33 L35)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **78**   Page 12 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **78.6**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **78**   *SC* **78.6**   *P* **32**   *L* **1**   # 522

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

There is no editorial instruction nor any indication of changes in the text in 78.6 (PICS).

SuggestedRemedy

If there are no changes to the PICS, remove 78.6 from the draft.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.6**   *P* **32**   *L* **1**   # 495

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ*

There appear to be no actual changes to this subclause. There are places in 78.6.2.2 and 78.6.3 where clause 78.4 has been incorrectly changed to 78.5; ignoring those, the content is the same as 802.3-2022

SuggestedRemedy

Remove subclause 78.6 (and its subclauses)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **78**   *SC* **78.6**   *P* **32**   *L* **6**   # 613

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

multiple reference to 78.5 in this subclause do not match 802.3-2022

SuggestedRemedy

change all occurences of 78.5 to 78.4 in subclause 78.6

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Subclause 78.6 was not modifed in P802.3cy and will be removed.

Cl **98**   *SC* **98.5.1**   *P* **34**   *L* **8**   # 524

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

The text is modified and new text is indicated with underline. Therefore, the instruction "Insert" is inappropriate (see page 20).

SuggestedRemedy

Change the editorial instruction to "Change the text in 98.5.1 as follows".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove text page 34, lines 10-21, and change format of the newly inserted line by removing the underline.

Cl **98B**   *SC* **98B.4**   *P* **147**   *L* **31**   # 630

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

unnecessary line added

SuggestedRemedy

delete extra line '-'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **104**   *SC* **104**   *P* **35**   *L* **1**   # 473

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **TR**   *Comment Status* **D**

According to the objectives, the project is to support clause 104 over appropriate media. Clause 104 is not present in the draft, and the current types do not support 25GBASE-T1. Discussion has been to use the same parameters as 10GBASE-T1.

SuggestedRemedy

Add clause 104, and 104.1.3 PoDL system types to the draft with an editing instruction to change the final sentence of the second paragraph from "A Type F PSE and Type F PD are compatible with 2.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 PHYs." to "A Type F PSE and Type F PD are compatible with 2.5GBASE-T1, 5GBASE-T1, 10GBASE-T1, and 25GBASE-T1 PHYs." (editor to put in strikeouts, underlines, etc as needed)

Also, change external references to Clause 104 (in 1.4.473 and 1.4.472 (if added)) to cross-references.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **104**   Page 13 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **104**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105** *SC* **105** *P* **35** *L* **1** # 381

Grow, Robert RMG Consluting

Comment Type **ER** *Comment Status* **D** *EZ*

P802.3cz (Amendment 7) currently specifies includes many changes to Clause 105. With this project currently targeted to be Amendment 9, base text should include proposed inserts, replaces and changes in P802.3/D2.2.

SuggestedRemedy

Use base text from P802.3cz/D2.2. Individual comments will be made on items noticed.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Align Clause 105 with changes done in IEEE P802.3cz D2.2

Cl **105** *SC* **105** *P* **39** *L* **1** # 663

Murty, Ramana Broadcom

Comment Type **E** *Comment Status* **D** *EZ*

Blank page

SuggestedRemedy

Remove blank page.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **105** *SC* **105.1** *P* **35** *L* **7** # 384

Marris, Arthur Cadence Design Systems

Comment Type **E** *Comment Status* **D** *EZ*

Missing editing instructions

SuggestedRemedy

Add editing instructions for 105.1.1 and 105.1.3. Correct editing instruction for 105.7. It is not an editorial note.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #408 for 105.1.1

Add editing instructions for 105.1.3. Correct editing instruction for 105.7. It is not an editorial note.

Cl **105** *SC* **105.1.1** *P* **34** *L* **6** # 523

Ran, Adee Cisco

Comment Type **E** *Comment Status* **D** *EZ*

Editorial instruction is missing for 105.1.1

SuggestedRemedy

Add "Change" instruction.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #408 for 105.1.1

Cl **105** *SC* **105.1.1** *P* **35** *L* **4** # 382

Grow, Robert RMG Consluting

Comment Type **E** *Comment Status* **D** *EZ, 105.1.1*

Missing editorial instruction.

SuggestedRemedy

Change first paragraph (as modified by P802.3cz/D2.2) as follows:

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #408

Cl **105** *SC* **105.1.1** *P* **35** *L* **7** # 408

Wienckowski, Natalie General Motors

Comment Type **T** *Comment Status* **D** *EZ, 105.1.1*

The change made by IEEE Std 802.3cz removed the list of PHYs so no change is needed for IEEE Std 802.3cy.

SuggestedRemedy

Delete 105.1.1.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **105**
SC **105.1.1**

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8/15/2022 3:27:56 PM

Cl **105**   *SC* **105.1.1**   *P* **35**   *L* **7**   # 360

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, 105.1.1*

P802.3cz (Amendment 7) currently specifies removal of the list in this paragraph.

SuggestedRemedy

Use base text from P802.3cz/D2.2 or work with P802.3cz TF to agree on a common approach to such lists that keep reappearing in Std 802.3.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #408

Cl **105**   *SC* **105.1.1**   *P* **35**   *L* **10**   # 496

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.1*

Missing an editing instruction

SuggestedRemedy

Add an editing instruction to modify the first paragraph of 105.1.1 as shown.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #408

Cl **105**   *SC* **105.1.1**   *P* **35**   *L* **10**   # 525

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.1*

Although it is preceded by "such as" which suggests it only includes examples, the list keeps growing.

The list of PHYs has no merit here. Table 105–1 contains the same information and can be referenced.

SuggestedRemedy

Delete the list of PHYs and refer to Table 105–1 instead.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #408 for 105.1.1

Cl **105**   *SC* **105.1.1**   *P* **35**   *L* **12**   # 347

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ, 105.1.2*

Instruction is not consistent with proper form.

SuggestedRemedy

Break into two instructions, one for text and one for figure.
Figure instructions should be
"Replace Figure 131-1 (adding stack for 25GBASE-T1 and adding NOTE 2) as follows:"
Then either:
"Insert new bullet e as shown:" and remove the underline, or
"Change list as follows:" and include whole list, with new item e underlined

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes relative to suggested remedy in >><<

Break into two instructions, one for text and one for figure.
Figure instructions should be
"Replace Figure >>105<<-1 (>>as modified by P802.3cz/D3.2<<, adding stack for 25GBASE-T1 and adding NOTE 2) as follows:"
Then >>"Insert new bullet e as shown:" and remove the underline<<

Cl **105**   *SC* **105.1.1**   *P* **35**   *L* **12**   # 526

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.2*

The change of the text in 105.1.2 does not include the context and makes the new text obscure for readers without going to the base document.

Also, "Update Figure 131-1" - should be 105-1.

SuggestedRemedy

Separate into two instructions, the first for the figure (and change it to Figure 105-1), the second to the text - either the second paragraph or the list of exceptions.

Include the full list of exceptions or use "insert a new item at the end of the list of exceptions".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 15 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.1.1**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **11**   # 361

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, 105.1.2*

Editorial instruction should follow the subclause title line. Editorial instruction should be split into two to point at appropriate documents (e.g., P802.3cz) and use correct editing instruction.

SuggestedRemedy

Move editorial instruction below subclause title. Instruction at this location should be "Replace Figure 105-1 (as modified by P802.3cz/D3.2) with the below which adds a protocol stack for 25GBASE-T1 and adds NOTE-2."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **12**   # 357

Lewis, Jon   Dell Technologies

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.2*

In the editing instructions for 105.1.2 it indicates that Figure 131-1 is being modified.

SuggestedRemedy

Change editing instructions to read: "Change 105.1.2 adding a new bullet e as shown below. Update Figure 105-1 adding stack for 25GBASE T1 and adding NOTE 2 as shown below"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **12**   # 497

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.2*

The editing instruction refers to figure 131-1 instead of 105-1

SuggestedRemedy

Change 131-1 to 105-1

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **12**   # 409

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.2*

Change to an editorial instruction for Figure 131-1 only and refer to IEEE Std 802.3cz.

SuggestedRemedy

Delete the existing editorial note and add the following: Replace Figure 131-1 (as modified by IEEE Std 802.3cz-202x) with the figure found below, which adds 25GBASE-T1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **16**   # 411

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.2*

Add editorial note for the text and put the text before the Figure.

SuggestedRemedy

_x_ means underline "x"
Change 105.1.2 adding a new bullet e) as shown below.
e) The MDI as specified in Clause165 for 25GBASE-T1 uses a single-lane data path.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **27**   # 362

Grow, Robert   RMG Consluting

Comment Type **TR**   *Comment Status* **D**   *EZ, 25GBASE-T1 PCS*

The PCS type should be specified.

SuggestedRemedy

25GBASE-T1 PCS

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #452

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 16 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.1.2**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **27**   # 615

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ, 25GBASE-T1 PCS*

the PCS in the 25GBASE-T1 stack should be identified similar to the pre-existing stacks

SuggestedRemedy

insert '25GBASE-T1' before PCS

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #452

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **27**   # 456

He, Xiang   Huawei

Comment Type **E**   *Comment Status* **D**   *EZ, 25GBASE-T1 PCS*

(Figure 105-1) For 25GBASE-T1, FEC is part of PCS functions, so it is better not to list FEC as a separate sublayer in this figure. Please refer to 25GBASE-T or 10GBASE-T1 as two examples.

SuggestedRemedy

Recommend to change the "PCS" box as "25GBASE-T1 PCS" (preferred) or "64B/65B RS-FEC PCS" and remove the FEC box.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #362 + remove the FEC box

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **28**   # 616

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

the FEC in the 25GBASE-T1 stack is not a separate entity from the PCS

SuggestedRemedy

delete 'FEC' and insert 'RS-FEC' before PCS

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #452

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **37**   # 453

D'Ambrosia, John   Futurewei, US Subsidiary of Huawei

Comment Type **TR**   *Comment Status* **D**

As previously commented the stacks in Figs 105-1 and 165-1 do not match, but it is noticed additionally that these diagrams treat FEC differently. In 105-1 FEC is in a sublayer under the PCS, while in 165-1 it is combined with the PCS. Clause 165.3.2.2.2 seem to indicate that FEC is a TX PCS function and there is no such subclause in the Rx PCS function. This is somewhat difficult to figure out.

SuggestedRemedy

If the commenter is understanding the draft correctly, the title of the 165 column should be 25GBASE-T1 PCS/FEC/PMA. As noted previously, the stack of 25GBASE-T1 in Fig 105-1 should be modified to match the stack in Fig 165-1.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Looking at the P802.3cz D2.2, they added the very same PCS/PMA/PMD and Figure 105-1 shows onlt 25GBASE-AU with no mention of PCS/FEC/PMA. The purpose of these additions is somewhat confusing.

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **37**   # 452

D'Ambrosia, John   Futurewei, US Subsidiary of Huawei

Comment Type **TR**   *Comment Status* **D**   *EZ*

The stack for 25GBASE-T1 in Fig 105-1does not match the stack shown in Fig 165-1.

SuggestedRemedy

Modify the stack of 25GBASE-T1 in Fig 105-1 to match the stack in Fig 165-1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Redraw 25GBASE-T1 stack in Figure 105-1 to match Figure 165-1.

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **45**   # 363

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, Figure 105-1*

P802.3cz also adds a stack for BASE-AU.

SuggestedRemedy

Use Figure 105-1 from P802.3cz/D2.2 as base for modification.   The 25GBASE-T1 stack could be inserted to the left of the BASE-AU stack. Stack widths will probably have to be narrowed to accommodate 4 different stacks.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 17 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.1.2**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **45**   # 410

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   *EZ, Figure 105-1*

Need to change Figure 105-1 to also include 25GBASE-AU.

SuggestedRemedy

Modify Figure 105-1 to include 4 PHYS, similar to 125-1, adding the 25GBASE-AU stack from 802.3cz D2.1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.1.2**   *P* **35**   *L* **47**   # 364

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, 105.1.2*

Insert second editorial instruction.

SuggestedRemedy

Insert new item at bottom of lettered list.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #347

Cl **105**   *SC* **105.1.3**   *P* **35**   *L* **13**   # 358

Lewis, Jon   Dell Technologies

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.3*

Are editing instructions needed for Table 105-1?

SuggestedRemedy

Please add the appropriate editing instructions

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #365

Cl **105**   *SC* **105.1.3**   *P* **35**   *L* **50**   # 617

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.3*

this subclause is missing editor's instructions for sublclause 105.1.3 and Table 105-1

SuggestedRemedy

add editor's instruction as needed

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #365

Cl **105**   *SC* **105.1.3**   *P* **35**   *L* **51**   # 412

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.3*

Add editorial instruction.

SuggestedRemedy

Insert new fifth paragraph for 25GBASE-T1 after the new paragraph inserted by IEEE Std 802.3cz-202x.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #365

Cl **105**   *SC* **105.1.3**   *P* **35**   *L* **51**   # 413

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.3*

SuggestedRemedy

Delete unchanged paragraph on 25GBASE-T.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #365

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 18 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.1.3**   8/15/2022 3:27:56 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.1.3**   *P* **35**   *L* **51**   # 365

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, 105.1.3*

Missing editorial instruction. Unchanged text is included in draft without including alll of 105.1.3.

SuggestedRemedy

Delete page 35, line 52 through page 36, line 4. Editing instruction: "Insert new third paragraph below (before paragraph inserted by P802.3cz/D2.2."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.1.3**   *P* **35**   *L* **52**   # 527

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.3*

Editorial instruction is missing for 105.1.3.
The first paragraph in the amendment is the third one in the base standard.

SuggestedRemedy

Add a "Change" instruction and bring in the missing two paragraphs.

Alternatively, use "Insert the following paragraph after the third paragraph of 105.1.3".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #365

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **6**   # 484

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ, 105.1.3*

There is no corresponding editing instruction for this edit to 105.1.3 and the full text of 105.1.3 is not shown.

SuggestedRemedy

Add editing instruction at P35 L49 (by header):
Insert new fourth paragraph to 105.1.3 as shown:
Delete unchanged paragraph beginning "25GBASE-T represents…" (P35 L52 - P36 L4)
Remove underline from new paragraph at P36 L6 - P36 L10
Replace "Physical Layer devices... at 25Gb/s" on P36 L11 with new editing instruction,
"Insert new row at end of Table 105-1 as shown: (unchanged rows not shown)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #365

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **6**   # 414

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

Underline is not needed with an "insert" instruction.

SuggestedRemedy

Remove underlining from new text.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **7**   # 528

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

"for transmitting 25 Gb/s Ethernet" - and also receiving?

The preceding paragraph for 25GBASE-T has "for data communication at 25 Gb/s" instead.

SuggestedRemedy

Use "for data communication at 25 Gb/s" as in the previous paragraph.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 19 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.1.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **9**   # 618

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

description should conform to existing baseline text

SuggestedRemedy

change 'Physical Coding Sublayers' to 'physical coding sublayer'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Line number was fixed.

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **12**   # 366

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, Table 105-1*

Missing editorial instruction.

SuggestedRemedy

Insert new row into Table 105-1 for 25GBASE-T1 after 25GBASE-T:

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #415

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **13**   # 529

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-1*

Editorial instruction is missing for Table 105-1.

SuggestedRemedy

Add an appropriate instruction.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #415

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **13**   # 415

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-1*

Add editorial instruction.

SuggestedRemedy

Insert a row for for 25GBASE-T1 before the row for 25GBASE-T in Table 105-1 (as modified by IEEE Std 802.3cz-202x) as follows (unchanged rows not shown):
As this is not the last row, a row needs to be added that is merged and includes an elipses.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **21**   # 485

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

suppressing hyphenation on description will make the description more readable.

SuggestedRemedy

suppress hyphenation on "single balanced pair of conductors"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.1.3**   *P* **36**   *L* **50**   # 498

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-1*

Missing an editing instruction

SuggestedRemedy

Add an editing instruction to insert a new paragraph after the 3rd paragraph as shown and modify Table 105-1 as shown.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #415

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 20 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.1.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.2**   *P* **37**   *L* **1**   # 619

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-2*

this subclause is missing editor's instructions for sublclause 105.2 and Table 105-2

SuggestedRemedy

add editor's instruction as needed

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #367

Cl **105**   *SC* **105.2**   *P* **37**   *L* **1**   # 499

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-2*

Missing an editing instruction to modify Table 105-2

SuggestedRemedy

Add an editing instruction to insert a new row at the end of Table 105-2 as shown.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #367

Cl **105**   *SC* **105.2**   *P* **37**   *L* **2**   # 367

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-2*

Missing editorial instruction.

SuggestedRemedy

Insert a row for 25GBASE-T1 after 25GBASE-T and a column for 25BASE-AU PCS/PMA/PMD between clause 114 and clause 166 (inserted by P802.3cz/D2.2.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **2**   # 416

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-2*

Add editorial instruction.

SuggestedRemedy

Insert a row for for 25GBASE-T1 before the row for 25GBASE-T in Table 105-2 and columns for Clause 98 and Clause 165 (as modified by IEEE Std 802.3cz-202x) as follows (unchanged rows not shown):

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #367

Cl **105**   *SC* **105.2**   *P* **37**   *L* **2**   # 417

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

Need to have merged rows before and after new row that is in the middle of the table.

SuggestedRemedy

Change the row before 25GBASE-T1 to a merged row with an elipses. Add a row after 25GBASE-T1 that is merged and includes an elipses.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **3**   # 530

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-2*

Editorial instruction is missing for Table 105-2.

SuggestedRemedy

Add an appropriate instruction.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #367

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 21 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.2**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.2**   *P* **37**   *L* **3**   # 487

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-2*

Edits in Table 105-2:
No editing instruction for Table 105-2,
missing editing marking on entry in Nomenclature row for "25GBASE-T1"
Row should be after 25GBASE-T, which is in the middle of the table, but no other rows are shown.

SuggestedRemedy

Add editing instruction, "Change Table 105-2 adding new row for 25GBASE-T1
immediately below row for 25GBASE-T, and adding new column for 25GBASE-T1
PCS/PMA at the right hand side as shown (unchanged rows not shown):"
Add underline to Nomenclature entry for "25GBASE-T1"
Add new "... " row following new row for 25GBASE-T1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #367

Cl **105**   *SC* **105.2**   *P* **37**   *L* **6**   # 348

Brown, Matt   Huawei

Comment Type **E**   *Comment Status* **D**   *EZ*

Table too wide.

SuggestedRemedy

Reduce table with by adjust column widths.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The Editor will attempt to reduce the size of the table. If that does not work, the Editor will break the table into two, separating fiber and copper media.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **6**   # 368

Grow, Robert   RMG Consluting

Comment Type **TR**   *Comment Status* **D**   *EZ*

As amendment 9, the table from P802.3cz should be used as base.

SuggestedRemedy

Include clause 166 column from P802.3cz/D2.2.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **6**   # 451

D'Ambrosia, John   Futurewei, US Subsidiary of Huawei

Comment Type **TR**   *Comment Status* **D**   *Table 105-2*

Table 105-2 appears incomplete -
Clause 78 EEE optional support not indicated
Clause 106 mandatory use of RS and 25GMII not indicated
Clause 165 is noted as PMD, not PCS / PMA as noted by the title of the agenda

SuggestedRemedy

For 25GBASE-T1 entry in Table 105-2, make the following:
Clause 78 EEE - Optional
Clause 106 - Mandatory

Change title of 165 column to "25GBASE-T1 PCS/PMA "

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **8**   # 531

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *Table 105-2*

In Table 105-2:

The column for clause 165 should be labeled "25GBASE-T1 PCS and PMA".

EEE should be marked "O", RS and 25GMII should be "M" and "O".

Several of the clauses are included in this draft and the heading numbers should be made active links.

The columns can be narrowed to make the table fit within the margins.

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #451

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 22 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.2**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.2**   *P* **37**   *L* **11**   # 462

Lusted, Kent   Intel Corporation

Comment Type **TR**   *Comment Status* **D**   *Table 105-2*

Table 105-2 entry "25GBASE-T1" has a column for Clause 165 denoted as "25GBASE-T1 PMD". This name is misleading because Clause 165 contains a PCS and a PMA. Note that PMD is not used at all in the title of Clause 165 on page 40. Furthermore, the Table 44-1 in IEEE Std 802.3-2022 (page 1716) provides a column name of "RS-FE PCS and 1-pair PMA" which is inconsistent with the existing text in 3cy D2.0 Table 105-2.

SuggestedRemedy

Change the column title from "25GBASE-T1 PMD" to "25GBASE-T1 PCS/PMA"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **11**   # 621

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *Table 105-2*

25GBASE-T1 has a PCS/PMA not a PMD

SuggestedRemedy

change PMD to PCS/PMA in the 165 column

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #451

Cl **105**   *SC* **105.2**   *P* **37**   *L* **17**   # 486

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T**   *Comment Status* **D**   *Table 105-2*

"25GBASE-T1 PMD" - 25GBASE-T1 is a PCS/PMA not a PMD.

SuggestedRemedy

Change "25GBASE-T1 PMD" to "25GBASE-T1 PCS/PMA"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **20**   # 620

McClellan, Brett   Marvell

Comment Type **TR**   *Comment Status* **D**   *Table 105-2*

missing EEE, RS, 25GMII in table

SuggestedRemedy

insert 'O' in the EEE column, 'M' in RS, and 'O' in 25GMII

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **20**   # 463

Lusted, Kent   Intel Corporation

Comment Type **TR**   *Comment Status* **D**   *Table 105-2*

Table 105-2 entry "25GBASE-T1" does not include a row entry for 25GMII. The 25GMII should be an optional implemenation for the Physical Layer type. Note that 25GMII is referenced in Cl 165.1.2 (p40, line 37)

SuggestedRemedy

Mark the appropriate box for 25GMII with "O" for Optional

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.2**   *P* **37**   *L* **20**   # 461

Lusted, Kent   Intel Corporation

Comment Type **TR**   *Comment Status* **D**   *Table 105-2*

Table 105-2 entry "25GBASE-T1" does not include a row entry for Reconciliation Sublayer RS. The RS is necessary because the RS adapts the bit serial protocols of the MAC to the parallel format of the PCS service interface.

SuggestedRemedy

Mark the appropriate box for RS with "M" for Mandatory

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 23 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.2**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.3**   *P* **37**   *L* **24**   # 454

D'Ambrosia, John   Futurewei, US Subsidiary of Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ*

Subclauses 105.3.1 through 105.3.5 are listed with no changes. Is this the intent?

SuggestedRemedy

Delete subclauses 105.3.1 through 105.3.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #625 and #626. Delete 105.3.1 and 105.3.5.

Cl **105**   *SC* **105.3**   *P* **37**   *L* **25**   # 532

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Why are all the subclause headings listed?

The new inserted text should not be underlined.

SuggestedRemedy

Remove the unnecessary ones before 105.3.6

Remove the underline format.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #625 and #626. Delete 105.3.1 and 105.3.5.

Cl **105**   *SC* **105.3**   *P* **37**   *L* **26**   # 385

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *EZ*

Unneeded sublclause headings

SuggestedRemedy

Delete 105.3.1 to 105.3.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #625 and #626. Delete 105.3.1 and 105.3.5.

Cl **105**   *SC* **105.3**   *P* **37**   *L* **26**   # 349

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ*

No changes to 105.3.1 through 105.3.5"

SuggestedRemedy

Delete headings for 105.3.1 through 105.3.5.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #625 and #626. Delete 105.3.1 and 105.3.5.

Cl **105**   *SC* **105.3**   *P* **37**   *L* **26**   # 488

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

Headers for 105.3.1 through 105.3.5 are unnecessary

SuggestedRemedy

Delete headers 105.3.1 through 105.3.5 and go straight to 105.3.6.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #625 and #626. Delete 105.3.1 and 105.3.5.

Cl **105**   *SC* **105.3**   *P* **37**   *L* **26**   # 622

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

it isn't necessary to show section headers for 105.3.1 through 105.3.5

SuggestedRemedy

delete section headers for 105.3.1 through 105.3.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #625 and #626. Delete 105.3.1 and 105.3.5.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 24 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.3**   *P* **37**   *L* **40**   # 623

McClellan, Brett   Marvell

Comment Type **ER**   *Comment Status* **D**

this text is unnecessary and redundant

SuggestedRemedy

delete 'Clause 98 Auto-Negotiation may be used by 25GBASE-T1 PHYs. Auto-Negotiation is performed upon link
startup through the use of half-duplex differential Manchester encoding.'

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Discussion might be needed as to why it might redunant and unnecessary. The text is technically correct

Cl **105**   *SC* **105.3.2**   *P* **37**   *L* **28**   # 625

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**

add a description of the 10GBASE-T1 PCS

SuggestedRemedy

insert "25GBASE-T1 PHYs use the PCS specified in Clause 165. The 25GBASE-T1 PCS performs encoding of data from the 25GMII to 64B/65B RS_FEC code blocks and PAM4 modulation and transfers the symbols to the PMA and performs error correction and decoding
of PAM4 symbols from the PMA and transfers the decoded data to the 25GMII." add editor instructions as needed

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per text . Use the following editorial note: "Insert a new paragraph at the end of 105.3.2 as follows:"

Cl **105**   *SC* **105.3.4**   *P* **37**   *L* **33**   # 626

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**

add a description of the 10GBASE-T1 PMA

SuggestedRemedy

insert "25GBASE-T1 PHYs use the PMA specified in Clause 165. TThe PMA provides for full duplex communications over a single balanced pair of conductors." add editor instructions as needed

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per text with change of "Tthe" to "The". Use the following editorial note: "Insert a new paragraph at the end of 105.3.4 as follows:"

Page line was adjusted.

Cl **105**   *SC* **105.3.6**   *P* **37**   *L* **40**   # 350

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ*

When using "insert" instruction, no underline required.

SuggestedRemedy

Remove underline.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.3.6**   *P* **37**   *L* **40**   # 489

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

Style of text about 25GBASE-T1 does not fit the style of the surrounding text in this clause (note that clause 126 where 802.3ch edited had a very different style). Also, the second statement "is optional" is unnecessary, as the text already says AN "may be used". The text can be rephrased in the same style as the rest of the clause and much simpler.

SuggestedRemedy

Change editing instruction to "Insert new paragraph at the end of 105.3.6 as follows:"
Replace 2 paragraph edit at P37 L40-43 with:
"Clause 98 AN may be used by the 25GBASE-T1 PHY, but is not required."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 25 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.3.6**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.5**   *P* **37**   *L* **45**   # 624

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-3*

this subclause is missing editor's instructions for sublclause 105.5 and Table 105-3

SuggestedRemedy

add editor's instruction as needed

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

Cl **105**   *SC* **105.5**   *P* **37**   *L* **46**   # 351

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ, Table 105-3*

Editorial instruction complete wrong. This is not and editorial note.

SuggestedRemedy

Change instruction to "Insert new row at the end of Table 105-3 as follows."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

Cl **105**   *SC* **105.5**   *P* **37**   *L* **49**   # 371

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

This misplaced editorial note should be deleted as well as the PICS subclause.

SuggestedRemedy

Delete note and subclause 105.7 from the draft.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

There is a tracked change on page/line 38/22. Move editorial instruction to proper location.

Cl **105**   *SC* **105.5**   *P* **37**   *L* **49**   # 490

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-3*

Editing instruction is incorrect, position of edit needs to be after 25GBASE-T, which would have rows following the edit.

SuggestedRemedy

Replace "Editorial Note: Change 105.7 as shown below." with "Change Table 105-3 inserting new rows for 25GBASE-T1 after rows for 25GBASE-T1 as shown (unchanged rows not shown):"
Add … row after the changed row in the table.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

Cl **105**   *SC* **105.5**   *P* **37**   *L* **49**   # 370

Grow, Robert   RMG Consluting

Comment Type **ER**   *Comment Status* **D**   *EZ, Table 105-3*

Missing editorial instruction for 105.5. I think this table is supposed to be arranged in what I am now calling "illuminati sort order", though there appear to be some violations of that order. May as well insert after 25GBASE-T as far as I'm concerned.

SuggestedRemedy

Insert row into Table 105-3 for 25GBASE-T1 after 25GBASE-T.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.5**   *P* **37**   *L* **49**   # 418

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-3*

Editorial insturction is not correct.

SuggestedRemedy

Replace the current Editorial Note with: Insert a new row for 25GBASE-T1 at the end of Table 105-3 (as modified by IEEE Std 802.3cz-202x) as follows (unchanged rows not shown):

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 26 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.5**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.5**   *P* **37**   *L* **49**   # 533

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-3*

The editorial note seems to be an instruction, and to point to the wrong place.

SuggestedRemedy

Change "Editorial Note: Change 105.7 as shown below" to "Change Table 105-3 as shown below".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

Cl **105**   *SC* **105.5**   *P* **37**   *L* **49**   # 356

Lewis, Jon   Dell Technologies

Comment Type **E**   *Comment Status* **D**   *EZ*

Editorial Note is separated from 105.7.

SuggestedRemedy

If possible, please try to move the Editorial Note closer to 105.7

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **105**   *SC* **105.5**   *P* **37**   *L* **50**   # 500

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-3*

The "editorial note" should be replaced with an editing instruction to modify Table 105-3

SuggestedRemedy

Add an editing instruction to insert new rows at the end of Table 105-3 as shown.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

Cl **105**   *SC* **105.5**   *P* **38**   *L* **1**   # 359

Lewis, Jon   Dell Technologies

Comment Type **E**   *Comment Status* **D**   *EZ, Table 105-3*

Are editing instructions needed for Table 105-3?

SuggestedRemedy

Please add the appropriate editing instructions

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #370

Cl **105**   *SC* **105.5**   *P* **38**   *L* **6**   # 419

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

SuggestedRemedy

Merge cells in row with elipses.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 27 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.5**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.5**   *P* **38**   *L* **7**   *#* 534

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   Table 105-3, L

It is unclear what the expressions "L=1" etc. mean in this table.

In the table in the base document, the "Notes" column includes references to the subclause within the PHY clause that specifies this delay. In this case, it should be "See 165.10"

Looking at 165.10, there are different maximum delay specifications depending on the "Interleave" parameter. Interleaving (or "L") is negotiated between the link partners and may be different in either direction, so is unknown in advance for a given device.

The purpose of this table (per the text preceding it: "network planners and administrators conform to constraints regarding the cable topology and concatenation of devices... Table 105–3 contains the values of maximum sublayer delay (sum of transmit and receive delays at one end of the link".

Therefore it seems adequate to list here only the maximum delay of the PHY, which happens with L=8. The text in 165.10 can include further details about how the delay can be lower in some cases.

SuggestedRemedy

Use only one row for "25GBASE-T1 PHY", with the data for L=8, and point to 165.10 in the "Notes" column, consistent with the other rows.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment was re-classified as T

Cl **105**   *SC* **105.5**   *P* **38**   *L* **8**   *#* 627

McClellan, Brett   Marvell

Comment Type **ER**   *Comment Status* **D**   Table 105-3, L

L' isn't defined anywhere in Clause 105 and makes the note confusing. Follow the example for 10GBASE-T1 in Clause 44

SuggestedRemedy

break the 25GBASE-T box into 4 lines with these labels: '25GBASE-T1 no interleave', '25GBASE-T1 2x interleave', '25GBASE-T1 4x interleave', '25GBASE-T1 8x interleave'. Replace the 'L=' notes in each row with 'See 165.10'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #534

Cl **105**   *SC* **105.5**   *P* **38**   *L* **16**   *#* 628

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   EZ

missing note d from base standard

SuggestedRemedy

insert "dCumulative round-trip delay contributed by up to four PMA stages in a PHY."

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Note is not currently in use in snippet of Table 105-3 used in the draft

---

Cl **105**   *SC* **105.7**   *P* **38**   *L* **18**   *#* 501

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   EZ, 105.7

Missing an editing instruction to modify clause 105.7

SuggestedRemedy

Add an editing instruction to modify the first paragraph of 105.7 as shown.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #491

Cl **105**   *SC* **105.7**   *P* **38**   *L* **19**   *#* 491

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   EZ, 105.7

There is no subclause 105.7 in the base standard, and no edits to it in this draft.

SuggestedRemedy

Delete subclause 105.7, P38 L19-25

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **105**   Page 28 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **105.7**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **105**   *SC* **105.7**   *P* **38**   *L* **20**   # 535

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Editorial instruction is missing.

SuggestedRemedy

Add an appropriate instruction.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #491

Cl **105**   *SC* **105.7**   *P* **38**   *L* **20**   # 352

Brown, Matt   Huawei

Comment Type **ER**   *Comment Status* **D**   *EZ*

Missing editorial instruction.

SuggestedRemedy

Add editorial instruction.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #491

Cl **105**   *SC* **105.7**   *P* **38**   *L* **45**   # 629

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ, 105.7*

this subclause is missing editor's instructions for subclause 105.7

SuggestedRemedy

add editor's instruction as needed

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #491

Cl **105**   *SC* **105.7**   *P* **39**   *L* **1**   # 420

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

SuggestedRemedy

remove blank page

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **149B**   *SC* **149B**   *P* **148**   *L* **15**   # 631

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

use of 'MultiGBASE-T1' may be too general here if new PHYs are later specified that don't conform to this subclause

SuggestedRemedy

replace 'MultiGBASE-T1' with 'Clause 149 and Clause 165'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1**   *P* **40**   *L* **10**   # 393

Akin, Sami   VW AG

Comment Type **E**   *Comment Status* **D**   *EZ*

In the first sentence of the paragraph, we have '… as well as the 25GBASE-T1 Physical Medium Attachment (PMA) sublayers'. The 'sublayers' should be 'sublayer'. It's a typo.

SuggestedRemedy

We should have '… as well as the 25GBASE-T1 Physical Medium Attachment (PMA) sublayer'.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 29 of 77

COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1**   8/15/2022 3:27:57 PM

SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.1**   *P* **40**   *L* **14**   # 536

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ, PHYs*

The phrase "The 25GBASE-T1 PHYs" seems to be inhereted from clause 149 which has
"The 2.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 PHYs", because that clause specifies
three different PHYs. But here only one PHY is specified, and is later referred to in
singulare, e.g. in the third paragraph "a 25GBASE-T1 PHY".

Similarly in two other instances in this paragraph, and also in the first sentence in 165.1.2
and maybe elsewhere.

Other artifacts of this inheritance seem to exist, e.g. in 165.1.3 "The 25GBASE-T1 PHY
each operate" should be "The 25GBASE-T1 PHY operates".

SuggestedRemedy

Change "PHYs" to "PHY" and change plural to singular as necessary in this paragraph and
elsewhere where appropriate.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #511

Cl **165**   *SC* **165.1**   *P* **40**   *L* **14**   # 511

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ, PHYs*

Though similar problems exist in many clauses in 802.3, I think in many cases using plural
"PHYs" in this clause is wrong. There is one 25GBASE-T1 PHY specification and most of
the time text is addressing the 25GBASE-T1 PHY specification, not multiple instances of a
25GBASE-T1 interface on a networked device, or various 25GBASE-T1 PHY
implementations. Grammar problems left after deleting 50 Gb/s and 100 Gb/s highlight
this, for example on line 17, "the 25GBASE-T1 PHYs" where "the" and "PHYs" would have
been appropriate for a list of multiple rates, but is not for a single rate.

SuggestedRemedy

Search on "PHYs" and correct grammar as appropriate (e.g., "the 25GBASE-T1 PHY" or "a
25GBASE-T1 PHY", etc.) Including: p.41, l. 25; p, 42, l, 6; p. 95, l. 37; p. 109, l. 28, 29; p.
161, l. 33.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1**   *P* **40**   *L* **23**   # 664

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

Clause 78 is in the draft - should be an active cross-ref, not external.

SuggestedRemedy

Change "Clause 78" to an active cross reference and remove external tag.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.1**   *P* **40**   *L* **24**   # 422

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

Clause 78 is in the draft.

SuggestedRemedy

Change "Clause 78" to black and make it a hyperlink.
Also on P42L5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.1**   *P* **40**   *L* **27**   # 389

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *EZ*

Inconsistent capilization of "this Clause"

SuggestedRemedy

Compare the capitalisation of clause on line 21 and 28. Choose a style for this and make it
consitant

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 30 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1.1**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.1.2**   *P* **40**   *L* **35**   # 636

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*
  indicate that Auto-Negotiation is optional

SuggestedRemedy
  Insert 'Optional' before Auto-Negotiation

Proposed Response   *Response Status* **W**
  PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.2**   *P* **40**   *L* **37**   # 665

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*
  Clause 98 is in the draft - should be an active cross-ref, not external.

SuggestedRemedy
  Change "Clause 98" to an active cross reference and remove external tag.

Proposed Response   *Response Status* **W**
  PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.2**   *P* **40**   *L* **37**   # 421

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*
  Clause 98 is in the draft.

SuggestedRemedy
  Change "Clause 98" to black and make it a hyperlink.
  Also on P41L42, P41L46, P41L52, P49L5, P96L46, P97L47, P117L40, P117L44, P131L6,
  P131L33, P141L28, P37L40, P37L43

Proposed Response   *Response Status* **W**
  PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.2**   *P* **40**   *L* **37**   # 390

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *EZ*
  Clause 98

SuggestedRemedy
  Make Clause 98 a cross reference. Also page 41 line 42. Also Clause 78 on page 42 line 5.
  Scrub the document and make Clause 45, Clause 78 and Clause 98 an active cross
  reference thoughout rather than an external.

Proposed Response   *Response Status* **W**
  PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **30**   # 512

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *multi-pair, EZ*
  Grammar problem and other aritifacts left after deleting 50 Gb/s and 100 Gb/s.

SuggestedRemedy
  A 25GBASE-T1 PHY operates using full-duplex communications over one, shielded
  balanced pair of conductors with an effective rate of 25 Gb/s in each direction while
  meeting the requirements...

Proposed Response   *Response Status* **W**
  PROPOSED ACCEPT IN PRINCIPLE.

  See comments #391 and #448

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **30**   # 448

Carlson, Steve   HSD, Bosch, Ethernovia

Comment Type **E**   *Comment Status* **D**   *multi-pair, EZ*
  Leftover reference to two and four pairs: "over one, two, or four shielded…"

SuggestedRemedy
  Delete "two or four" from the sentence

Proposed Response   *Response Status* **W**
  PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 31 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **30**   # 394

Akin, Sami   VW AG

Comment Type **ER**   *Comment Status* **D**   *multi-pair, EZ*

The first sentence of the first paragraph states 'The 25GBASE-T1 PHY each operate using full-duplex communications over one, two, or four shielded balanced pair of conductors with an effective rate of 25 Gb/s on each pair ...'. Following the changes in the objectives, should this sentence indicate only one shielded balanced pair? Although I set the category of this comment as editorial, I am not fully sure if this is editorial or technical.

SuggestedRemedy

We should have "The 25GBASE-T1 PHY each operates using full-duplex communications over one shielded balanced pair of conductors with an effective rate of 25 Gb/s in each direction simultaneously while meeting the requirements (EMC, temperature, etc.) of automotive environments."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #391 and #448

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **30**   # 391

Marris, Arthur   Cadence Design Systems

Comment Type **E**   *Comment Status* **D**   *multi-pair, EZ*

Change "each operate" to "operates"

SuggestedRemedy

Change "each operate using full-duplex communications over one, two, or four shielded balanced pair of conductors" to "operates using full-duplex communications over a shielded balanced pair of conductors"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **30**   # 666

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T**   *Comment Status* **D**   *multi-pair, EZ*

"The 25GBASE-T1 PHY each operate…over one, two, or four shielded… on each pair…" didn't get cleaned up when we deleted the 2 and 4 lane 50GBASE-T2 and 100GBASE-T4

SuggestedRemedy

change the first sentence of the first paragraph of 165.1.3 to:"The 25GBASE-T1 PHY operates using full-duplex communications over a single shielded balanced pair of conductors with an effective rate of 25 Gb/s in each direction simultaneously while meeting the requirements (EMC, temperature, etc.) of automotive environments."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #391 and #448

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **30**   # 537

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *multi-pair, EZ*

"using full-duplex communications over one, two, or four shielded balanced pair of conductors with an effective rate of 25 Gb/s on each pair in each direction simultaneously"

I thought this is a single pair PHY at 25 Gb/s total?

SuggestedRemedy

Rewrite as necessary

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #391 and #448

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 32 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **31**   # 405

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   *multi-pair, EZ*

Only 1 pair of conductors is used.

SuggestedRemedy

Change: The 25GBASE-T1 PHY each operate using full-duplex communications over one, two, or four shielded balanced pair of conductors with an effective rate of 25 Gb/s on each pair in each direction simultaneously ...
To: The 25GBASE-T1 PHY operates using full-duplex communications over one shielded balanced pair of conductors with an effective rate of 25 Gb/s in each direction simultaneously ...

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #391 and #448

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **31**   # 466

Tu, Mike   Broadcom

Comment Type **TR**   *Comment Status* **D**   *multi-pair, EZ*

25GBASE-T1 operates over one cable only.

SuggestedRemedy

Change to:
"... using full-duplex communications over one shielded balanced pair of conductors with an effective rate of 25 Gb/s in each direction simultaneously while ..."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #391 and #448

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **31**   # 502

Huber, Thomas   Nokia

Comment Type **T**   *Comment Status* **D**   *multi-pair, EZ*

The scope of the project was changed to being only 25 Gb/s. The first sentence of the paragraph seems to be referring to operation at 50 Gb/s or 100 Gb/s by allowing for 2 or 4 pairs with an effective rate of 25G on each pair.

SuggestedRemedy

Change
"one, two, or four shielded balanced pair of conductors with an effective rate of 25 Gb/s on each pair in each direction simultaneously..."
to
"one shielded balanced pair of conductors with an effective rate of 25 Gb/s in each direction simultaneously ..."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comments #391 and #448

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **35**   # 637

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

rates' is redundant to MBd and incorrectly plural

SuggestedRemedy

delete 'rates'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **35**   # 423

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

grammar

SuggestedRemedy

Change: at 14 062.5 MBd rates.
To: at a 14 062.5 MBd rate.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 33 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **35**   # 514

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

There is only one Baud rate listed, "rates" should be singular.

SuggestedRemedy

"at a 14.0625 GBd rate."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **35**   # 513

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

Most multigigabit specifications use GBd for Baud rate (e.g., Clause 30, Clause 48 for 10GBASE-X, Clause 108 for 25GBASE-R, etc.)   Also change similar MHz specifications.

SuggestedRemedy

p. 41, l. 35 - 14.0625 GBd
p. 42, l. 17 - 14.0625 GBd
p. 44, l. 5 - 14.0625 GBd
p. 151, l. 4 - 14.0625 GBd
p. 50, l. 21 - 14.0625 MHz
p. 107, l. 38 - 0.878 906 25 GHz
p. 113, l. 37 - 14.0625 GHz
p. 144, l. 34 - 14.0625 GHz

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

As proposed, except for

p. 50, l. 21 - 14.0625 GHz

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **36**   # 638

McClellan, Brett   Marvell

Comment Type **TR**   *Comment Status* **D**

TX_D, TX_EN and TX_ER are not 25GMII signals. Note that Clause 149 has the same error.

SuggestedRemedy

change '25GMII TX_D, TX_EN, and TX_ER' to '25GMII TXD and TXC'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

An MR against Clause 149 needs to be filed to address that issue.

Cl **165**   *SC* **165.1.3**   *P* **41**   *L* **37**   # 538

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

Since this PHY uses RS-FEC, the concept of BER is inadequate; when a FEC (super)frame is discarded, all bits are replaced with error bits, so the BER can be much higher than the 1e-12 stated here.

The performance of this PHY is defined by the rfer target, which can be stated as eqivalent to some BER if RS-FEC was not used. The method used in other PHYs is comparision of MAC frame loss ratio (FLR). The FLR equivalent of BER=1e-12 is 6.2e-10 (see for example 92.1).

The suggested remedy uses FLR. Alternatively, "performance" or other terms can be used instead, but not simply "BER".

SuggestedRemedy

Change "To maintain a bit error ratio (BER) of less than or equal to 10^–12" to "To maintain a frame loss ratio (FLR) equivalent to a bit error ratio (BER) of less than or equal to 10^–12".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 34 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.1.3**   *P* **42**   *L* **6**   # 667

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **TR**   *Comment Status* **D**

"The EEE capability is a mechanism by which 25GBASE-T1 PHYs are able to reduce power consumption during periods of low link utilization." this doesn't really describe something we spend a lot of time discussing - namely that EEE does this based on link utilization IN EITHER DIRECTION.

SuggestedRemedy

add "independently for each direction of the link" to the end of the sentence.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3.1**   *P* **42**   *L* **28**   # 539

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   *L*

The text in this subclause specifies what happens "In the transmit direction, in normal mode", but does not say anything about the receive direction in normal mode.

Specifically, the number L is used as part of the specification; it is not stated here how L is determined, but in 165.3.2.2 (PCS Transmit function) it is written that "The interleaver settings requested in each direction of transmission may be different... signaled during the PAM2 training mode Infofield exchange". This means L can be different in the receive and transmit directions; this should be noted here (any preferably notation should be used to clarify that there are two simultaneous values of L).

A reference to the definition and content of the infofield (in 165.4.2.4.5) would also be helpful.

SuggestedRemedy

Rewrite as necessary

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

No specific changes to text proposed.

Cl **165**   *SC* **165.1.3.1**   *P* **42**   *L* **35**   # 340

Gorshe, Steve   Microchip Technology

Comment Type **ER**   *Comment Status* **D**

The phrase "RS-FEC (936, 846, 2^10)" appears to be the incorrect format. This implies that the FEC symbol size is 2^10 = 1024 bits. It appears that it should be "RS-FEC (936, 846, 10)" using the 10-bit symbol size of KR-4 and KP-4 FEC codes

SuggestedRemedy

If the comment is correct, this should be changed to RS-FEC (936, 846, 10)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.3.3**   *P* **44**   *L* **22**   # 424

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

78.3 is in the draft.

SuggestedRemedy

Change "78.3" to black and make it a hyperlink.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.1.6**   *P* **45**   *L* **32**   # 540

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**

The conventions listed here are mainly for state diagrams. There is another subclause 165.3.7.1 which also lists state diagram conventions, and is located right before the state diagrams - where it is more helpful to the reader.

SuggestedRemedy

Move the content of this subclause to 165.3.7.1, merging as necessary.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

165.3.7.1 covers just state diagram conventions, while 165.1.6 is more generic in nature. No changes needed. The current structure mimics the existing clauses in the approved 802.3-2022

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 35 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.1.6**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.2.2**   *P* **47**   *L* **6**   # 541

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   *L*

The value of L and the choice of precoding are requested by the link partner during link training - which is a PMA function. These values have to be passed to the PCS for correct encoding.

Since all information exchage from the PMA to the PCS is defined in terms of service interface primitives, some primitive should indicate the value of L and precoding selection.

The of PMA_CONFIG.indication could be expanded to to include these values but I suspect it may not be straightforward, since the existing content (master or slave) is available before training starts, but the values of L and precoding are determined only later.

SuggestedRemedy

Add a primitive as described in the comment, in the text and figures as necessary.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

No specific changes were proposed.

Cl **165**   *SC* **165.2.2.3.3**   *P* **50**   *L* **3**   # 656

Wu, Peter   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

Upon receipt of this primitive the PMA transmits on the MDI the signals corresponding to the indicated symbols processed to conform to 149.5.2. Misssing ",", hard to read

SuggestedRemedy

Upon receipt of this primitive, the PMA transmits on the MDI the signals corresponding to the indicated symbols processed to conform to 149.5.2.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.2.2.3.3**   *P* **50**   *L* **4**   # 603

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

incorrect reference

SuggestedRemedy

change 149.5.2 to 165.5.3

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.2.2.3.3**   *P* **50**   *L* **4**   # 668

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

Incorrect reference. "Upon receipt of this primitive the PMA transmits on the MDI the signals corresponding to the indicated symbols processed to conform to 149.5.2." The reference points to the transmitter electrical specifications for 2.5G/5G/10GBASE-T1 (Clause 149). The electrical specifications for 25GBASE-T1 have different timing and are specified in 165.5.3

SuggestedRemedy

Change external reference of 149.5.2 to an active cross-reference to 165.5.3

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.2.2.9.1**   *P* **52**   *L* **38**   # 669

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

The allowed values of pcs_data_mode are missing. (this happens in other clauses, but is done correctly in clause 113). From the state diagram, it is clear that the allowed values are TRUE and FALSE.

SuggestedRemedy

Insert the following at the end of 165.2.2.9.1:
The pcs_data_mode parameter can take on one of the following two values of the form:
TRUE PHY is in state PCS_Data (see Figure 165–27)
FALSE PCS is not in state PCS_Data (see Figure 165–27)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 36 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.2.2.9.1**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165** *SC* **165.3.2**   *P* **54**   *L* **28** # 670

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T** *Comment Status* **D**

"The PCS comprises one PCS Reset function and two simultaneous and asynchronous operating functions. The PCS operating functions are: PCS Transmit and PCS Receive." - this has been copied from clause to clause, but isn't true for clause 165 (or 149 or even 97). The automotive clauses add a 3rd function to the PCS - the PCS OAM. see figure 165-4.

SuggestedRemedy

change ""The PCS comprises one PCS Reset function and two simultaneous and asynchronous operating functions. " to ""The PCS comprises one PCS Reset function and two simultaneous and asynchronous operating functions, and the PCS OAM function."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.3.2**   *P* **55**   *L* **29** # 657

Wu, Peter   Marvell

Comment Type **E** *Comment Status* **D**   *EZ*

alert_detect should also be added to the note

SuggestedRemedy

"NOTE—rx_lpi_active and tx_lpi_active are only required for the EEE capability" is changed to " NOTE—alert_detect, rx_lpi_active and tx_lpi_active are only required for the EEE capability"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.3.2**   *P* **58**   *L* **11** # 467

Tu, Mike   Broadcom

Comment Type **TR** *Comment Status* **D**   *EZ*

The control codes for MultiGBASE-T1 is defined in Table 149-2, not Table 149-1.

SuggestedRemedy

Change all references to table of control code from Table 149-1 to Table 149-2, including the list below:
1. Page 58, line 11, Figure 165-6.
2. Page 59, line 10, Figure 165-7.
3. Page 61, line 10.
4. Page 61, line 19.
5. Page 70, line 2.
6. Page 70, line 3.
7. Page 79, line 25.
8. Page 79, line 26.
9. Page 80, line 9.
10. Page 80, line 11.
11. Page 132, line 43.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.3.2.2**   *P* **56**   *L* **2** # 671

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T** *Comment Status* **D**

"Dashed rectangles in Figure 165–16 and Figure 165–17 are used to indicate states and state transitions in the transmit process state diagram that shall be supported by PHYs with the EEE capability." is a duplicate 'shall' with the previous requirement to conform to FIgures 165-16 and 165-17. It also does not have a PICS entry, confirming that it is duplicative.

SuggestedRemedy

Change "that shall be reported" to "that are reported"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per text + update PICS as needed.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **165** Page 37 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **165.3.2.2** 8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2**   *P* **56**   *L* **13**   # 542

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status* **D**   *L*

The term L is used in the text here without explanation of what it denotes.

One has to read to the bottom of this subclause to understand what L means and how it is determined.

SuggestedRemedy

Preferablky add text to introduce the concept of interleaving, the definition of L and how it is determined, at the beginning of this subclause, before L is used.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

No specific changes were proposed

Cl **165**   *SC* **165.3.2.2**   *P* **56**   *L* **20**   # 543

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status* **D**   *EZ*

"The symbol period, T, is 1000 / 14.0625 ps"

This exercise is not very friendly for the reader. The number 14.0625 seems to come out of nowhere (only much later it is found that the signaling rate is 14.0625 GBd).

The ratio evaluates to 71 + 1/9 ps, and this number can be used instead, since it is expressed as ratio anyway.

Also, this seems to be the nominal period, without the allowed frequency deviation (which is not specified here, but I assume it is per 165.5.3.6).

SuggestedRemedy

Change to "71 1/9" formatted using equation editor to format the common fraction. Or use "71.111…"

Add "nominal".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change to "71 1/9" and add "nominal" to the name of the symbol period.

Cl **165**   *SC* **165.3.2.2**   *P* **56**   *L* **20**   # 724

Jonsson, Ragnar   Marvell

Comment Type   **E**   *Comment Status* **D**   *post-deadline, EZ*

The notation "1000 / 14.0625 ps" can be confusing, even if it is not ambiguous.

SuggestedRemedy

Change "1000 / 14.0625 ps" to "(1000 / 14.0625) ps"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #543

Cl **165**   *SC* **165.3.2.2**   *P* **56**   *L* **37**   # 672

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type   **E**   *Comment Status* **D**   *EZ*

"the PCS Transmit function shall use a 65B coding technique to generate, at each symbol period, code-groups that represent data or control" - the previous text refers to symbol periods as the period of the PAM4 signalling. A 65B code group does not happen "at each symbol period". The added incorrect phrase does not seem to add any value.

SuggestedRemedy

delete ", at each symbol period,"
Also, update PICS PCT7 Feature text (P132 L38) deleting the same text

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.2.2**   *P* **56**   *L* **41**   # 341

Gorshe, Steve   Microchip Technology

Comment Type   **ER**   *Comment Status* **D**

Here and other places, the term "9360-bit (936, 846) RS-FEC frames" is used. This terminology is incorrect or at least inconsistent with typical terminology. The 9360-bit entity is actually an FEC codeword. An FEC frame consists of multiple FEC codewords.

SuggestedRemedy

In all instances where the 9360-bit block is referred to as an FEC "frame" the term should be changed to FEC "codeword".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 38 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2**   *P* **57**   *L* **2**   # 658

Wu, Peter   Marvell

Comment Type   **E**   *Comment Status* **D**   *EZ*

What does "RS" mean here? Reconciliation SUblayer or Reed-Soloman Frames

SuggestedRemedy

After reaching the normal mode of operation, EEE-capable PHYs may enter the LPI
transmit mode under the control of the RS via the 25GMII-> "After reaching the normal
mode of operation, EEE-capable PHYs may enter the LPI transmit mode under the control
of the Reconciliation sublayer via the 25GMII."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changed capitalization of "sublayer"

After reaching the normal mode of operation, EEE-capable PHYs may enter the LPI
transmit mode under the control of the RS via the 25GMII-> "After reaching the normal
mode of operation, EEE-capable PHYs may enter the LPI transmit mode under the control
of the Reconciliation Sublayer via the 25GMII."

Cl **165**   *SC* **165.3.2.2.1**   *P* **57**   *L* **35**   # 544

Ran, Adee   Cisco

Comment Type   **E**   *Comment Status* **D**   *EZ*

Both "65-bit" and "65B" used in the text; is there a difference?

Note that the RS-FEC encoding is not related to the PCS's 65-bit blocks, since due to the
10-bit OAM its block size is not an integer mutiple of 65.

65B is used as part of the 64B/65B encoding scheme name but should not be used on its
own.

SuggestedRemedy

Use "65-bit" consistently, and remove the "65B" label from the RS-FEC name.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.2.2.3**   *P* **57**   *L* **51**   # 640

McClellan, Brett   Marvell

Comment Type   **E**   *Comment Status* **D**   *EZ*

header disconnected from subclause text

SuggestedRemedy

move header after Figure 156-6 to be contiguous with subclause text

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 39 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2.4**   *P* **59**   *L* **44**   # 673

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type   **E**   *Comment Status* **D**   165.3.2.2.4 - 165.3.2.2.12

With the exception of deleting a table to reference clause 149, It seems that 165.3.2.2.4 through 165.3.2.2.12 are identical to clause 149. This is as it should be, but is redundant. Suggest referencing clause 149 for the whole thing. In the suggested remedy I have been careful to use 'shalls' and 'are' based on whether there is a requirement to reference in the PICS.

SuggestedRemedy

Delete 165.3.2.2.4 through 165.3.2.2.12. Replace with:
"165.2.2.4 Block structure
The 65-bit block structure specified in 149.3.2.24 is used by 25GBASE-T1, with the block format shown in Figure 149-8.
165.2.2.5 Control codes
The mapping of control characters is used to map the 25GMII and 25GBASE-T1 PCS is as specified for MultiGBASE-T1 PHYs in in 149.3.2.2.5 and shown in Table 149-2. All 25GMII control code values that do not appear in the table shall not be transmitted and shall be treated as an error if received.
165.2.2.6 Ordered sets
The use of Ordered sets is as specified for the MultiGBASE-T1 PHYs in 149.3.2.2.6.
165.2.2.7 Idle (/I/)
Idle control characters shall be as specified for MultiGBASE-T1 PHYs in 149.3.2.2.7.
165.2.2.8 LPI (/LI/)
Low Power Idle control characters shall be as specified for MultiGBASE-T1 PHYs in 149.3.2.2.8.
165.2.2.9 Start (/S/)
Start control characters are as specified for MultiGBASE-T1 PHYs in 149.3.2.2.9.
165.2.2.10 Terminate (/T/)
Terminate control characters are as specified for MultiGBASE-T1 PHYs in 149.3.2.2.10.
165.2.2.11 Ordered set (/O/)
Ordered set control characters shall be specified for MultiGBASE-T1 PHYs in 149.3.2.2.11.
165.2.2.12 Error (/E/)
Error characters are as specified for MultiGBASE-T1 PHYs in 149.3.2.2.12. See R_BLOCK_TYPE and T_BLOCK_TYPE function definitions in 165.3.7.2.4 for further information."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes as proposed + update PICS.

Cl **165**   *SC* **165.3.2.2.4**   *P* **59**   *L* **45**   # 426

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **D**   165.3.2.2.4 - 165.3.2.2.12

The Block structure is identical to the MultiGBASE-T1 Block Structure in Clause 49.

SuggestedRemedy

Replace the contents of 165.3.2.2.4 with the following:
The block structure used by 25GBASE-T1 is the MultiGBASE-T1 block structure defined in 149.3.2.2.4 with the format as shown in Figure 149-8. The characters in the 65-bit block in Figure 149-8 are either data characters or control characters and, when transferred across the 25GMII interface, the corresponding TXC or RXC bit is set accordingly.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #673

Cl **165**   *SC* **165.3.2.2.5**   *P* **60**   *L* **48**   # 641

McClellan, Brett   Marvell

Comment Type   **E**   *Comment Status* **D**   *EZ*

header disconnected from subclause text

SuggestedRemedy

insert page break

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.2.2.5**   *P* **61**   *L* **10**   # 425

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **D**   *EZ, Table 149-1*

The MultiGBASE-T1 Control Codes are in Table 149-2, not Table 149-1.

SuggestedRemedy

Change: Table 149-1
To: Table 149-2
Also on P61L19, P132L43, P137L6, P58L11, P59L11, P70L2, P70L3, P79L25, P79L26, P80L9, P80L11, P132L43.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 40 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2.5**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2.5**   *P* **61**   *L* **10**   # 639

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ, Table 149-1*

incorrect reference to Table 149-1, should be Table 149-2

SuggestedRemedy

change Table 149-1 to Table 149-2 on page 61 lines 10 and 19, also change page 58 line 11, also change page 59 line 10, page 70 lines 2 and 3, page 79 lines 25 and 26, page 80 lines 9 and 11. Update associated PICs.
If an associated comment to create a new Table 165-2 is accepted, then these references will be to Table 165-2.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.2.2.5**   *P* **61**   *L* **10**   # 643

McClellan, Brett   Marvell

Comment Type **ER**   *Comment Status* **D**

using Table 149-2 as a reference has some issues, the column headings are 'XGMII control code', '2.5G/5G/10G
BASE-T1
control code', and '2.5G/5G/10G
BASE-T1
O code' instead of 25GMII and 25GBASE-T1

SuggestedRemedy

copy Table 149-2 to 165.3.2.2.5 and label as Table 165-2, change the column headers as indicated, and change the reference to Table 165-2

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #673

Cl **165**   *SC* **165.3.2.2.5**   *P* **61**   *L* **10**   # 642

McClellan, Brett   Marvell

Comment Type **T**   *Comment Status* **D**   *165.3.2.2.4 - 165.3.2.2.12*

missing statement on additional control codes

SuggestedRemedy

insert 'All 25GMII control code values that do not appear in the table shall not be transmitted and shall be treated as an error if received.'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #673

Cl **165**   *SC* **165.3.2.2.14**   *P* **62**   *L* **39**   # 503

Huber, Thomas   Nokia

Comment Type **E**   *Comment Status* **D**   *EZ*

Awkward grammar in the sentence

SuggestedRemedy

Change:
The RS-FEC encoding takes the 8460-bit vector, consisting of tx_group130x65B, and the 10-bit OAM_field, and shall generate the 90 10-bit parity symbols (900 bits total).
To:
The RS-FEC encoding takes the 8460-bit vector, consisting of tx_group130x65B and the 10-bit OAM_field, and generates the 90 10-bit parity symbols (900 bits total).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 41 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2.14**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.2.18**   *P* **65**   *L* **51**   # 674

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *165.3.2.2.18 - 165.3.2.2.21*

Similarly, 165.3.2.2.18 through 165.3.2.2.21 are identical to clause 149, and can be referenced. (note I've left EEE capability since this seems to be an area we discuss diverging frequently, and the numbers are different in the wake time table)

SuggestedRemedy

Replace 165.3.2.2.18 through 165.3.2.2.21 each as follows:
165.3.2.2.18 PCS scrambler
The PCS scrambler operates as specified in 149.3.2.2.18.
165.3.2.2.19 Gray mapping for PAM4 encoding
The PCS transmit process shall map pairs of bits to Gray-coded PAM4 symbols as specified in 149.3.2.2.19
165.3.2.2.20 Selectable precoder
The PCS transmit process shall precode the Gray-coded PAM4 symbols as specified in 149.3.2.2.20.
165.3.2.2.21 PAM4 encoding
The PCS transmit process shall encode each precoder output symbol as specified in 149.3.2.2.21

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes as proposed + update PICS.

Cl **165**   *SC* **165.3.2.2.22**   *P* **67**   *L* **34**   # 725

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

Sleep signal should be composed of 16 RS frames

SuggestedRemedy

change "eight Reed-Solomon frames" to "sixteen Reed-Solomon frames"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.2.2.23**   *P* **67**   *L* **35**   # 726

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

Sleep signal should be composed of 16 RS frames

SuggestedRemedy

change "eight RS-FEC frames" to "sixteen RS-FEC frames"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 42 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.2.23**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.3**   *P* **68**   *L* **37**   # 545

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

It is not stated that the receive function includes undoing the effect of the selected precoding. Precoding is a separate function from PAM4 mapping in Figure 165–6, but it does not appear in Figure 165–7.

The channel description in the precoder options is not sufficient; even if it matches the actual channel, at least a mod4 operation (not trivial) has to be implemented..

SuggestedRemedy

Add a box "Undo selected precoder" in Figure 165–7.

Add content similar to 165.3.2.2.20 in a subclause under 165.3.2.3 describing the decoding used for each precoder option (e.g., $G(n)=(P(n)+P(n-1))$ mod 4 for 1+D). It can be mentioned that this decoding may be implemented in several ways.

In the second paragraph of 165.3.2.3, change "The received PAM4 symbols are demapped" to "The received PAM4 symbols, after decoding the selected Precoder operation (see <new subclause>), are demapped".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add a box "Undo selected precoder" in Figure 165–7.

In the second paragraph of 165.3.2.3, change "The received PAM4 symbols are demapped" to "The received PAM4 symbols, after decoding the selected Precoder operation (see <new subclause>), are demapped".

Content similar to 165.3.2.2.20 in a subclause under 165.3.2.3 describing the decoding used for each precoder option (e.g., $G(n)=(P(n)+P(n-1))$ mod 4 for 1+D) was not added, since no specific text was proposed.

Cl **165**   *SC* **165.3.2.3**   *P* **69**   *L* **13**   # 715

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change 16 to 32

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.2.3**   *P* **69**   *L* **17**   # 427

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

grammar

SuggestedRemedy

Change: and subject
To: and is subject

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.2.3**   *P* **69**   *L* **22**   # 727

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

Sleep signal should be composed of 16 RS frames

SuggestedRemedy

change "eight RS-FEC frames" to "sixteen RS-FEC frames"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 43 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.2.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.2.4**   *P* **69**   *L* **33**   # 728

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, partial frame*

Wake signal should be composed of 16 RS frames

SuggestedRemedy

change "eight RS-Frames" to "sixteen RS-Frames"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.3**   *P* **70**   *L* **12**   # 675

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type   **E**   *Comment Status* **D**   *165.3.3 - 165.3.4*

Similarly, 165.3.3 through 165.3.4 are identical to clause 149

SuggestedRemedy

Replace 165.3.3 and 165.3.4 as follows:
165.3.3 Test-pattern generators
The test-pattern generator mode shall operate as specified in 149.3.3.
165.3.4 Side-stream scrambler polynomials
The PCS Transmit function shall employ side-stream scrambling as specified in 149.3.4.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes as proposed + update PICS

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **23**   # 711

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change 16 to 32

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **28**   # 710

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, partial frame*

Figure 165-12 is inconsistent with L=8 super frame. There is a general inconsistency in the document due to incorrect definition of 16 partial PHY frames per PHY frame. There should be 32 partial PHY frames per PHY frame, where each PHY frame is 8 RS-FEC frames.

SuggestedRemedy

Correct figure 165-12 to use 32 partial PHY frames per PHY frame. Same change needs to be done in every place that assumes 16 partial PHY frames per PHY frame.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 44 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.5**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **43**   # 712

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, partial frane*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

change 15 to 31 and 16 to 32nd

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **44**   # 713

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *ne, partial frame, 450 to 1170*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

change 450 to 1170 in line 44 and 45

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **44**   # 428

Wienckowski, Natalie   General Motors

Comment Type   **T**   *Comment Status* **D**   *450 to 1170*

The equation for Sn was updated, but the text is still the same from Clause 149.

SuggestedRemedy

Change: Each partial PHY frame is 450 bits long, beginning at Sn where (n mod 450) = 0.
To: Each partial PHY frame is 1170 bits long, beginning at Sn where (n mod 1170) = 0.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **44**   # 469

Tu, Mike   Broadcom

Comment Type   **TR**   *Comment Status* **D**   *450 to 1170*

The size of a partial PHY frame is 1170 bits, not 450 bits.

SuggestedRemedy

Change the sentence to:
"Each partial PHY frame is 1170 bits long, beginning at Sn where (n mod 1170) = 0."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **44**   # 652

McClellan, Brett   Marvell

Comment Type   **T**   *Comment Status* **D**   *450 to 1170*

If the PHY frame is 1/4th of an RSFEC frame then it is 1170 symbols long.

SuggestedRemedy

change "Each partial PHY frame is 450 bits long, beginning at Sn where (n mod 450) = 0."
to "Each partial PHY frame is 1170 symbols long, beginning at Sn where (n mod 1170) = 0."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.5**   *P* **71**   *L* **48**   # 714

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change 17550 to 36270, 17654 to 36365, and 18720 with 37440.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

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

Cl **165**
SC **165.3.5**

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8/15/2022 3:27:57 PM

Cl **165**   *SC* **165.3.6**   *P* **72**   *L* **17**   # 729

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

Sleep signal should be composed of 16 RS frames

SuggestedRemedy

change "eight RS-FEC frames" to "sixteen RS-FEC frames"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.6**   *P* **72**   *L* **22**   # 732

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *post-deadline, EZ*

The description in lines 22-24 is easily misunderstood to imply a sequence of signals, as opposed to two parts of the signal.

SuggestedRemedy

Change "The first part of this cycle is known as the quiet period and lasts for a time lpi_quiet_time. The quiet period is defined in 165.3.6.2. The second part of this cycle is known as the refresh period and lasts for a time lpi_refresh_time." to "The one part of this cycle is known as the quiet period and lasts for a time lpi_quiet_time. The quiet period is defined in 165.3.6.2. The another part of this cycle is known as the refresh period and lasts for a time lpi_refresh_time."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Minor editorial changes relative to suggested remedy.

Change "The first part of this cycle is known as the quiet period and lasts for a time lpi_quiet_time. The quiet period is defined in 165.3.6.2. The second part of this cycle is known as the refresh period and lasts for a time lpi_refresh_time." to "The one part of this cycle is known as the quiet period and lasts for a time lpi_quiet_time. The quiet period is defined in 165.3.6.2. The other part of this cycle is known as the refresh period and lasts for a time lpi_refresh_time."

Cl **165**   *SC* **165.3.6**   *P* **72**   *L* **28**   # 733

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, EZ*

lpi_offset no longer exists and has been replaced with master and slave specific versions

SuggestedRemedy

replace "lpi_offset" with "lpi_master_offset, lpi_slave_offset

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.6**   *P* **72**   *L* **29**   # 689

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline*

lpi_offset has been replaced with master and slave version. The values are incorrect, and it is also error prone to restate a value already defined in table 165-3.

SuggestedRemedy

Remove "lpi_offset is a fixed value equal to lpi_qr_time / 2 + 4 (52 RS-FEC frame periods)." OR replace it with "The values for these timing parameters are given in Table 165-03."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Remove "lpi_offset is a fixed value equal to lpi_qr_time / 2 + 4 (52 RS-FEC frame periods)."

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.6**   *P* **73**   *L* **10**   # 690

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *post-deadline, EZ*

The location of the slave refresh signal is incorrect or misleading in the Figure 165-13. It should be at location 42, not 43 (see Table 165-3)

SuggestedRemedy

Redraw location of slave refresh signal at location 42

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 46 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.6**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.3.6**   *P* **73**   *L* **28**   # 691

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *post-deadline, EZ*

The location of the slave refresh signal is incorrect or misleading in the Figure 165-14. It should be at location 42, not 43 (see Table 165-3)

SuggestedRemedy

Redraw location of slave refresh signal at location 42

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.6.1**   *P* **74**   *L* **15**   # 716

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change "PHY frame" to "RS-FEC frame" in lines 15 and 16.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.6.1**   *P* **74**   *L* **18**   # 507

Graba, Jim   Broadcom

Comment Type **E**   *Comment Status* **D**   *EZ*

Typo

SuggestedRemedy

Change "… starting a frame 92" to "… starting at frame 92"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.7**   *P* **75**   *L* **5**   # 644

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**

With the few exceptions listed below it seems that 165.3.7 Detailed functions and state diagrams is identical to clause 149. This is as it should be, but is redundant. I suggest referencing clause 149 for most of the text and figures
Exceptions:
1.rfer_timer definition
2.Figure 165–20—EEE transmit state diagram where a change was introduced
3.A definition for variable rfer_test_lf was added, but is never used in the document. See related comment to remove it.
4.Use of 25GMII instead of XGMII
5.Subclause and Figure references to 165 instead of 149

SuggestedRemedy

Replace the text of 165.3.7.2.1 Constants with:
"The PCS state diagram constants are as defined in 149.3.7.2.1 with the exception that 25GMII replaces XGMII."
Replace the text of 165.3.7.22 Variables with:
"The PCS state diagram variables are as defined in 149.3.7.2.3 with the exception that 25GMII replaces XGMII and the following modifications:
Reference to 149.4.4.1 is replace by 165.4.4.1."
Replace the text of 165.3.7.2.3 Timers with:
"The PCS timers are as defined in 149.3.7.2.3 with the exception that 25GMII replaces XGMII and the following modified definitions:
rfer_timer
 Timer that is triggered every 12.5 μs ±1%. When the timer reaches its terminal count, rfer_timer_done = TRUE."
Replace the text of 165.3.7.2.4 Functions with:
"The PCS functions are as defined in 149.3.7.2.4 with the exception that 25GMII replaces XGMII and the following modifications:
Reference to 149.3.2.2.2 is replace by 165.3.2.2.2."
Replace the text of 165.3.7.2.5 Counters with:
"The PCS counters are as defined in 149.3.7.2.5."
In 165.3.7.3 delete Figure 165–16, Figure 165–17, Figure 165–18 and Figure 165–19 and replace all references these figures with Figure 149–16 Figure 149–17, Figure 149–18 and Figure 149–19.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **165**   Page 47 of 77
SC **165.3.7**   8/15/2022 3:27:57 PM

Cl **165**   *SC* **165.3.7.2.1**   *P* **75**   *L* **41**   # 546

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**

The constant name "RFER_CNT_LIMIT" is longer than the value it holds, and is more obscure. Wherever it is used in the text or in idagrams, it would be easier for the reader to understand if the number 16 was used instead (the number 16 is already used in some places, so the merit of having a constant is questionable).

Similarly for RFRX_CNT_LIMIT (88).

SuggestedRemedy

Replace instances of RFER_CNT_LIMIT with 16, and instances of RFRX_CNT_LIMIT with 88, and delete the constant definitions.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

Introducing obscure and undefioned numbers is less transparent than having constants with definitions.

Cl **165**   *SC* **165.3.7.2.2**   *P* **76**   *L* **3**   # 342

Gorshe, Steve   Microchip Technology

Comment Type **E**   *Comment Status* **D**   *EZ*

Is the list on this page supposed to be in strictly alphabetical order? If so, rf_valid should be moved

SuggestedRemedy

If strictly alphabetical order is intended on this page and the next page, it should be cleaned up

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Align the order of the variable definitions alphabetically.

Cl **165**   *SC* **165.3.7.2.2**   *P* **77**   *L* **6**   # 505

Martino, Kjersti   Inneos

Comment Type **E**   *Comment Status* **D**   *EZ*

Include explicit text indicating that lpi_refresh_detect is a boolean variable for consistency with other definitions

SuggestedRemedy

"Boolean variable that is set TRUE when"...

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.7.2.3**   *P* **78**   *L* **8**   # 470

Tu, Mike   Broadcom

Comment Type **TR**   *Comment Status* **D**

The rfer_timer is used to set the hi_rfer variable. The hi_rfer variable is set when there are 16 FEC errors within one rfer_timer interval. In 802.3ch 10GBASE-T1 this translate to 16 FEC errors within 31.25 usec, or about 98 FEC frames. For 802.3cy, we should keep the rfer_timer long enough to ~98 FEC frames as well.

We need to revise 45.2.3.87.2 PCS high RFER (3.2324.9) for 25GBASE-T1 as well.

See tu_3cy_01_08_16_2022.pdf for additional details.

SuggestedRemedy

1. On page 78, line 8, change "12.5 us" to "32.5 us".

2. On page 27, line 44, add the following:
"45.2.3.87.2 PCS high RFER (3.2324.9)
When read as a one, bit 3.2324.9 indicates that the MultiGBASE-T1 PCS receiver is detecting 16 or more RS-FEC errored blocks within one rfer_timer interval. When read as a zero, bit 3.2324.9 indicates that the MultiGBASE-T1 PCS is detecting fewer than 16 RS-FEC errored blocks within one rfer_timer interval. Bit 3.2324.9 is a reflection of the state of the hi_rfer variable defined in 149.3.8.1 and 165.3.8.1."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.7.2.3**   *P* **78**   *L* **16**   # 730

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

Sleep signal should be composed of 16 RS frames

SuggestedRemedy

change "eight RS-FEC frame" to "sixteen RS-FEC frame"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 48 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.3.7.2.3**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165** *SC* **165.3.7.2.6** *P* **80** *L* **37** # 509

Graba, Jim Broadcom

Comment Type **TR** *Comment Status* **D**

RX_FRAME includes unreliable Wake frames.

SuggestedRemedy

Add to the end of the description: "If the optional EEE is supported, RX_FRAME shall be FALSE during the first 8 WAKE frames."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Per comment + add a new PICS entry for the added requirement

Cl **165** *SC* **165.3.7.3** *P* **84** *L* **37** # 506

Martino, Kjersti Inneos

Comment Type **T** *Comment Status* **D**

Figure 165-18 is missing the dashed line box around the transition to R_TYPE(rx_coded) = 'LI' from RX_E

SuggestedRemedy

Add dashed line

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.3.8** *P* **87** *L* **1** # 645

McClellan, Brett Marvell

Comment Type **E** *Comment Status* **D** *165.3.8*

It appears that 165.3.8 PCS management is identical to clause 149 with the exception of reference to 25GMII. This is as it should be, but is redundant. I suggest referencing clause 149 for the entire text.

SuggestedRemedy

Replace all text of 165.3.8 with "PCS management is defined in 149.3.8 with the exception that 25GMII replaces XGMII."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.3.8.1** *P* **87** *L* **7** # 547

Ran, Adee Cisco

Comment Type **T** *Comment Status* **D** *165.3.8*

It seems that only few of the status variables defined in 54.2.1 are listed here.

Among the ones listed, the LPI variables seem unnecessary, since the LPI real-time status in both directions is conveyed over the 25GMII.

The status of training parameters would be important for management, but they are not listed.

Also, control variables are not listed; management interface should include at least reset, test modes, interleaving and precoding request to the link partner, and loopback mode.

SuggestedRemedy

Expend the management interface section per the comment, and further as necessary.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #645

Cl **165** *SC* **165.3.8.3** *P* **87** *L* **45** # 548

Ran, Adee Cisco

Comment Type **T** *Comment Status* **D**

The presence of a loopback function should be listed as part of the PCS functions, not as part of the PCS management, which typically only lists control variables and register mappings.

165.3.2.2 (PCS Transmit function) currently does not even mention that the transmit function can be fed by the receive function.

SuggestedRemedy

Add text to 165.3.2.2 (PCS Transmit function) that describes the effect of loopback mode.

Delete the content of 165.3.8.3 and add a control variable for loopback mode instead.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Delete the content of 165.3.8.3 and add a control variable for loopback mode instead.

The text "that describes the effect of loopback mode" was not provided at this time.

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

Cl **165**
SC **165.3.8.3**

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8/15/2022 3:27:57 PM

Cl **165**   *SC* **165.3.9.1**   *P* **88**   *L* **16**   *#* 717

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change "PHY frame" to "RS-FEC frame".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.3.9.2.1**   *P* **88**   *L* **34**   *#* 508

Graba, Jim   Broadcom

Comment Type **TR**   *Comment Status* **D**

OAM symbols may be unreliable during the beginning of Wake

SuggestedRemedy

Change according to pp 5-6 in graba_3cy_01_0816.pdf

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.9.4.1**   *P* **88**   *L* **48**   *#* 549

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

The text says "The body of this subclause is composed of state diagrams..." - but it does not. There is no state diagram in this subclause, only references to other subclauses, and two additional variables. I assume these variable definitions do not contradict any state diagrams defined elsewhere.

There is no need for this "conventions" subclause.

SuggestedRemedy

Delete subclause 165.3.9.4.1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.3.9.4.3**   *P* **89**   *L* **15**   *#* 718

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change "PHY frame" to "RS-FEC frame".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.4.2.2**   *P* **91**   *L* **30**   *#* 337

Maguire, Valerie   Copperopolis

Comment Type **E**   *Comment Status* **D**   *EZ*

Interface is capitalized when appearing after "MDIO" (see clause 45 header).

SuggestedRemedy

Replace, "MDIO interface" with "MDIO Interface"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.2**   *P* **91**   *L* **31**   *#* 429

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

45.2.1.7.4 is in the draft.

SuggestedRemedy

Change "45.2.1.7.4" to black and make it a hyperlink.
Also P138L35

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 50 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.4.2.2**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.4.2.3**   *P* **92**   *L* **9**   # 338

Maguire, Valerie   Copperopolis

Comment Type   **E**   *Comment Status*   **D**   *EZ*

Interface is capitalized when appearing after "MDIO" (see clause 45 header).

SuggestedRemedy

Replace, "MDIO interface" with "MDIO Interface"

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.3**   *P* **92**   *L* **10**   # 430

Wienckowski, Natalie   General Motors

Comment Type   **E**   *Comment Status*   **D**   *EZ*

45.2.1.7.5 is in the draft.

SuggestedRemedy

Change "45.2.1.7.5" to black and make it a hyperlink.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.3**   *P* **92**   *L* **10**   # 646

McClellan, Brett   Marvell

Comment Type   **E**   *Comment Status*   **D**   *EZ*

incorrect reference for the 802.3-2022 base

SuggestedRemedy

change 45.2.1.193.7 to 45.2.1.243.7

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.3**   *P* **92**   *L* **31**   # 431

Wienckowski, Natalie   General Motors

Comment Type   **E**   *Comment Status*   **D**   *EZ*

Incorrect reference. 45.2.1.193.7 doesn't exist in 802.3-2022.

SuggestedRemedy

Change :45.2.1.193.7" to "45.2.1.243.7".

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.4**   *P* **92**   *L* **20**   # 719

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status*   **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change "16th" to "32nd", 17550 to 36270, and 17645 to 36365

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.4.2.4.2**   *P* **93**   *L* **1**   # 550

Ran, Adee   Cisco

Comment Type   **E**   *Comment Status*   **D**   *EZ*

Unnecessary capitalization in "Frame Delimiter", especially in the text where "start" is not capitalized.

SuggestedRemedy

Change to "frame delimiter" in heading and text.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.4.2**   *P* **93**   *L* **3**   # 551

Ran, Adee   Cisco

Comment Type   **E**   *Comment Status*   **D**   *EZ*

Here "Octet x" (x=1 to 3) but in subsequent subclauses it is "Octx" (x=4 and above).

SuggestedRemedy

Change to be consistent, one way or another.

Proposed Response   *Response Status*   **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change to "Octet" for consistency.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 51 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.4.2.4.2**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.4.2.4.3**   *P* **93**   *L* **9**   # 720

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change 16 to 32 in line 9, change 16th to 32nd in line 10, and change 15 to 31 in line 11

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.4.2.4.5**   *P* **93**   *L* **49**   # 552

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

"When <condition" should not be followed by "then". "Then" is used after "if".

Also in 165.4.2.4.6 and 165.4.2.4.7.

SuggestedRemedy

Delete "then" in these 3 places, or change "When" to "If"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Delete "then" in these 3 places

Cl **165**   *SC* **165.4.2.4.6**   *P* **94**   *L* **50**   # 647

McClellan, Brett   Marvell

Comment Type **TR**   *Comment Status* **D**

"DataSwPFC24 shall be set to an integer multiple of 32. When the value of DataSwPFC24 is a multiple of 16 the switch from PAM2 to PAM4 occurs on a PHY frame boundary."
The L=8 superframe boundary is at multiples of 32.

SuggestedRemedy

change text to: "DataSwPFC24 shall be set to an integer multiple of 32. When the value of DataSwPFC24 is a multiple of 32 the switch from PAM2 to PAM4 occurs on a L=8 superframe boundary."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per text + update PICS

Cl **165**   *SC* **165.4.2.4.6**   *P* **94**   *L* **51**   # 471

Tu, Mike   Broadcom

Comment Type **TR**   *Comment Status* **D**

The DataSwPFC24 should be a multiple of 32, not 16.

SuggestedRemedy

Change this sentence to:
"When the value of DataSwPFC24 is a multiple of 32 the switch from PAM2 to PAM4 occurs on a PHY frame boundary."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.4.6**   *P* **94**   *L* **51**   # 721

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

There should be 32 partial PHY frames per PHY frame, where each PHY frame has 8 RS-FEC frames.

SuggestedRemedy

Change 16 to 32.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 52 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.4.2.4.6**   8/15/2022 3:27:57 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.4.2.4.10**   *P* **95**   *L* **50**   # 686

Razavi Majomard, Seid Alireza   Marvel

Comment Type **E**   *Comment Status* **D**   *EZ*

the definition of timing-lock should be moved to this section

SuggestedRemedy

move these lines from line 30-32 of clause 165.4.4.1 to line 50 of clause 165.4.2.4.10 : " In the TRAINING state, whenever SLAVE operating in loop timing locks the MASTER timing reference, it sets timing_lock_OK=1."

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.4.10**   *P* **96**   *L* **5**   # 553

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

Some values in Table 165-9 are given as expressions. It is unclear why these specific expressions are used, and the values are not easier to understand this way. Also, they look like ranges on first reading.

Also in Table 165-10.

SuggestedRemedy

Change the expressions to what they evaluate to. Add explanation in the text if necessary.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change the expressions to what they evaluate to.

Cl **165**   *SC* **165.4.2.4.10**   *P* **96**   *L* **5**   # 687

Razavi Majomard, Seid Alireza   Marvel

Comment Type **T**   *Comment Status* **D**   *40ms to 30ms*

The 40ms for half-duplex is too long.

SuggestedRemedy

change 40ms to 30ms

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.2.4.10**   *P* **96**   *L* **5**   # 692

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, 40ms to 30ms*

The 40ms mandatory half-duplex transmission is too long. It should be changed to 30ms.

SuggestedRemedy

change 40ms to 30ms

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.4.2.4.10**   *P* **96**   *L* **18**   # 693

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, 40ms to 30ms*

The 40ms mandatory half-duplex transmission is too long. It should be changed to 30ms.

SuggestedRemedy

change 40ms to 30ms

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.4.2.4.10**   *P* **96**   *L* **18**   # 688

Razavi Majomard, Seid Alireza   Marvel

Comment Type **T**   *Comment Status* **D**   *40ms to 30ms*

The 40ms for half-duplex is too long.

SuggestedRemedy

change 40ms to 30ms

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **165**
SC **165.4.2.4.10**

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8/15/2022 3:27:58 PM

Cl **165**   *SC* **165.4.2.6**   *P* **96**   *L* **53**   # 554

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status* **D**

"The frequency of the SEND_S signal shall be 703.125 MHz"

It is probably the nominal signaling rate, or the nominal frequency of the clock driving the "signal" (which we typically call "pattern").

The frequency can be within the range defined in 165.5.3.6.

SuggestedRemedy

Change "The frequency of the SEND_S signal shall be" to "The nominal signaling rate of the SEND_S signal is".

Consider changing "signal" to "pattern".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "The frequency of the SEND_S signal shall be" to "The nominal signaling rate of the SEND_S signal is".

Remove PICS as needed.

Cl **165**   *SC* **165.4.2.6.1**   *P* **98**   *L* **21**   # 432

Wienckowski, Natalie   General Motors

Comment Type   **E**   *Comment Status* **D**   *EZ*

98.5.1 is in the draft

SuggestedRemedy

Change "98.5.1" to black and make it a hyperlink.
Also P98L24, P98L27

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.3**   *P* **101**   *L* **15**   # 555

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status* **D**

165.4.3 and its subclauses are gratuitous content and a burden for readers.

165.4.3.1 is not referred to by any other subclause, and has one normative requirement that points to 165.5.3 (which includes normative requirements on its own).

165.4.3.2 has no normative requirements and is also not referred to by any other subclause.

SuggestedRemedy

Delete 165.4.3 and its subclauses, or move the content to an informative annex.

Alternatively, if there is something to write about the MDI (e.g. mechanical connnector specification) it should be placed here.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

The existing text provides explanation of how MDI encoding works and it is valuable to a reader. On the other hand, there is not enough material to move it into a self-standing Annex.

Cl **165**   *SC* **165.4.3.1**   *P* **101**   *L* **33**   # 433

Wienckowski, Natalie   General Motors

Comment Type   **E**   *Comment Status* **D**   *EZ*

typo

SuggestedRemedy

Change: During training or quietre fresh signalling,
To: During training or quiet refresh signalling,

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 54 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.4.3.1**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.4.3.1**   *P* **101**   *L* **33**   # 648

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

typo

SuggestedRemedy

change 'quietre' to 'quiet'

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.3.1**   *P* **101**   *L* **34**   # 694

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *post-deadline, EZ*

Misspelling of "refresh" in QR

SuggestedRemedy

Change "quietre fresh signalling" to "quiet refresh signalling"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.3.1**   *P* **108**   *L* **35**   # 599

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

A note was dropped during comment resolution for draft 1.2. This note is probably
unnecessary, but a possible text for the note is suggested.

SuggestedRemedy

If the note is needed, the suggested text for the note is: NOTE – the receiver can be
expected to ignore the first 150 ns following a transition to quiet refresh signaling.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

This is a copy of comment #333 against D1.3. That comment was rejected, there is no
change in position of the TF.

Cl **165**   *SC* **165.4.4.1**   *P* **103**   *L* **29**   # 685

Razavi Majomard, Seid Alireza   Marvel

Comment Type **E**   *Comment Status* **D**   *EZ*

timing-lock_OK is not mentioned in the state diagram

SuggestedRemedy

line 30-32 from clause 165.4.4.1 should be moved to clause 165.4.2.4.10 startup
sequence, page 95, line 50

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.4.1**   *P* **103**   *L* **30**   # 649

McClellan, Brett   Marvell

Comment Type **T**   *Comment Status* **D**   *EZ*

timing_lock_OK is defined but never used as a state machine variable

SuggestedRemedy

delete definition for timing_lock_OK

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.4.5**   *P* **106**   *L* **23**   # 659

Wu, Peter   Marvell

Comment Type **E**   *Comment Status* **D**   *EZ*

_mGigT1 should be replaced with_25GigT1

SuggestedRemedy

NOTE—The variables link_control and link_status are designated as link_control_mGigT1
and link_status_mGigT1, respectively, by the Auto-Negotiation Arbitration state diagram
(Figure 98–7) if the optional Auto-Negotiation function is implemented. -> NOTE—The
variables link_control and link_status are designated as link_control_25GigT1 and
link_status_25GigT1, respectively, by the Auto-Negotiation Arbitration state diagram
(Figure 98–7) if the optional Auto-Negotiation function is implemented.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 55 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.4.5**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.5**   *P* **107**   *L* **1**   # 556

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *PMA definition structure*

Shouldn't PMA electrical specifications be under the PMA main subclause (165.4)?

SuggestedRemedy

Consider moving the hierarchy of 165.5 to become 165.4.6.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.1**   *P* **107**   *L* **5**   # 557

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   *PMA definition structure*

Test modes are functional specifications, and should be defined under 165.4.2.2 (they override the normal transmit functionality defined there).

SuggestedRemedy

Move 165.5.1 to become 165.4.2.2.2.

Add a reference to the test modes to 165.4.2.2 (which currently only has normal operation mode or transmit zero).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.1**   *P* **107**   *L* **37**   # 558

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

"... the PHY shall provide access to a frequency reduced version of the transmit symbol clock or TX_TCLK_879"

"reduced version" and "or" are unclear.

"TX_TCLK_879 is equal to 878.90625 MHz"

A clock is not equal to its frequency. And this is and exact value with no tolerance.

SuggestedRemedy

Change to
"the PHY shall provide access to a frequency-divided version of its transmit symbol clock, with divisor 16, referred to as TX_TCLK_879. The nominal frequency of TX_TCLK_879 is 878.90625 MHz".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per comment. Update PICS as needed.

Cl **165**   *SC* **165.5.1**   *P* **107**   *L* **38**   # 515

Grow, Robert   RMG Consluting

Comment Type **E**   *Comment Status* **D**   *EZ*

IEEE Style Manual 16.3.2 also says to use space separators to the right of the decimal point.

SuggestedRemedy

If not changed to 0.878 906 25 GHz, should be 878.906 25 MHz.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

This is an IEEE 802.3 exception to the IEEE style manual.
https://www.ieee802.org/3/WG_tools/editorial/requirements/words.html#numbers

In text, where this improves clarity, follow the IEEE Editorial Style Manual: Use spaces instead of commas between numbers in tens or hundreds of thousands (e.g., 62 000, 100 000, but 4000).

Digits to the right of the decimal point.
>>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.<<

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 56 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.5.1**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.5.1**   *P* **108**   *L* **8**   # 559

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

"Test mode 7 is for enabling measurement of the bit error ratio of the link including the RS-FEC encoder/decoder, transmit and receive analog front ends of the PHY, and a cable connecting two PHYs"

The description in the remainder of this paragraph implies that what is actually measured is the RS-FEC block error ratio (rfer), not the BER; each errored block is counted as an error once, not as the number of nonzero bits.

Also, when performing such a test, here are typically two PHYs involved, not just one. Although the test mode is defined for a transmitter in one PHY, the rfer can only be measured in a receiver of the other PHY.

SuggestedRemedy

Change the quoted sentence to
"Test mode 7 is for enabling measurement of the RS-FEC block error ratio of a link partner in a link between two PHYs, including RS-FEC encoder and decoder, transmit and receive analog front ends, and a cable connecting the PHYs".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.1.1**   *P* **108**   *L* **14**   # 560

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

The figures seem to show test setups of transmitters or receivers, with external measurement instruments. These are not test fixtures - which are sometimes part of test setups (see for example Figure 97B–2, Figure 97B–3, Figure 93–5). This clause actually has specified test fixtures in 165.5.5.

I found the uses of "test fixture" in this context in clause 149, but this error should not be perpetuated.

SuggestedRemedy

Change the subclause title to "Test setups" and change "fixture" to "setup" in the text and figure titles.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.1.1**   *P* **108**   *L* **18**   # 561

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**

"for data communication only" - unclear. As opposed to what?

SuggestedRemedy

Either clarify what it means, or delete this phrase.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

This statement implies data channel only, not the control channel.

Cl **165**   *SC* **165.5.1.1**   *P* **109**   *L* **3**   # 562

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

Why is a balun required for measuring transmitter jitter?

The test setup in figure 165-30 seems sufficient, and there is no need to specify a different one; if anyone wants to use a single-ended scope they can do so with a balun - this would arguably be an equivalent setup.

SuggestedRemedy

Delete figure 153-32 and add " and jitter" to the title of figure 165-30.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.1.1**   *P* **109**   *L* **11**   # 354

Fischer, Peter   BKS Kabel-Service AG

Comment Type **T**   *Comment Status* **D**

Output of the balun should be specified

SuggestedRemedy

Define output impedance for the balun in relation to the digital scope/ capturing device

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

No specific value was proposed by the commenter. The test figures in 165.5.1.1 are taken from 149.5.1.1 IEEE Std 802.3-2022.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 57 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.5.1.1**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.5.1.1**   *P* **109**   *L* **19**   # 355

Fischer, Peter   BKS Kabel-Service AG

Comment Type **T**   *Comment Status* **D**

Output of the balun should be specified

SuggestedRemedy

Define output impedance for the balun in relation to the Spectrum analyser

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

No specific value was proposed by the commenter. The test figures in 165.5.1.1 are taken from 149.5.1.1 IEEE Std 802.3-2022.

Cl **165**   *SC* **165.5.2**   *P* **109**   *L* **41**   # 434

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**

As only 1 pair is used, we don't need a subscript on the lines.

SuggestedRemedy

In Figure 165-34, remove subscript "i" from SL\<p\>, SL\<n\>, Signal \<p\>, Signal\<n\>, DL\<p\>, and DL\<n\>.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.2**   *P* **110**   *L* **1**   # 695

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, source lane*

Reference to laning is probably obsoleted, given that 802.3cy no longer supports 50Gbps and 100Gbps.

SuggestedRemedy

Remove reference to laning

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #435

Cl **165**   *SC* **165.5.2**   *P* **110**   *L* **1**   # 435

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   *source lane*

Remove refereces to the subscript "i" in the text.

SuggestedRemedy

Change: Note that the source lane (SL) signals SLi\<p\> and SLi\<n\> are the positive and negative sides of the transmitter end's differential signal pair on lane i and the destination lane (DL) signals DLi\<p\> and DLi\<n\> are the positive and negative sides of the receiver end's differential signal pair on lane i.
To: Note that the source lane (SL) signals SL\<p\> and SL\<n\> are the positive and negative sides of the transmitter end's differential signal pair and the destination lane (DL) signals DL\<p\> and DL\<n\> are the positive and negative sides of the receiver end's differential signal pair.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.2**   *P* **115**   *L* **26**   # 437

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

grammar

SuggestedRemedy

Change: is used
To: are used

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.2**   *P* **117**   *L* **25**   # 438

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

Clause 45 is in the draft.

SuggestedRemedy

Change "Clause 45" to black and make it a hyperlink.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 58 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.5.2**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**　　*SC* **165.5.3**　　　　*P* **110**　　*L*　　　# 569

Ran, Adee   Cisco

Comment Type　**T**　　*Comment Status*　**D**　　　　　　　*EZ*

It seems odd that a transmitter operating above 14 GBd with a channel that can have an insertion loss of almost 30 dB at the Nyquist frequency, has no spefication of transition time, and no option or specification for transmitter equalization (pre-emphasis).

In high-speed backplane and copper cable PHYs, transition time and Tx equalization are among the important Tx parameters; without specifying them, a slow transmitter over a high-loss channel can create a large precursor ISI at the receiver input. Such ISI is not easily handled by the analog front end, and can impact the linearity of receiver circuits, in addition to placing unnecessary equalization burden on receivers (it is much cheaper in power and area to implement Tx equalization than Rx equalization).

SuggestedRemedy

Consider adding a specification for transmitter maximum transition time (a possible limit can be 60 ps for 20% to 80%, as in 130.7.1, or maybe lower).

Consider adding a precursor equalization function to the transmitter; see 130.7.1.10 for an example of how this can be specified.

Proposed Response　　　*Response Status*　**W**
PROPOSED REJECT.

No specific changes were proposed at this time.

Cl **165**　　*SC* **165.5.3**　　　　*P* **110**　　*L* **26**　　　# 565

Ran, Adee   Cisco

Comment Type　**T**　　*Comment Status*　**D**

"The electrical input shall be AC-coupled"

A transmitter is typically output, but this is a full-duplex PHY so there are no separate input and output.

SuggestedRemedy

Change the quoted phrase to "The transmitter shall be AC-coupled"

Proposed Response　　　*Response Status*　**W**
PROPOSED ACCEPT IN PRINCIPLE.

Changes per comment. Update PICS as needed.

Cl **165**　　*SC* **165.5.3**　　　　*P* **110**　　*L* **33**　　　# 566

Ran, Adee   Cisco

Comment Type　**T**　　*Comment Status*　**D**　　　　　　　*EZ*

"A mated connector pair has been included in the transmitter specifications defined in this subclause."

Which connector is that? The MDI connector is not specified.

Also in Table 165-12.

SuggestedRemedy

Clarify.

Proposed Response　　　*Response Status*　**W**
PROPOSED REJECT.

No specific changes were proposed.

Cl **165**　　*SC* **165.5.3**　　　　*P* **110**　　*L* **34**　　　# 696

Jonsson, Ragnar   Marvell

Comment Type　**E**　　*Comment Status*　**D**　　　*post-deadline, EZ*

The single sentence paragraph is not clear.

SuggestedRemedy

Remove this single sentence paragraph OR amend it such that its meaning becomes clear.

Proposed Response　　　*Response Status*　**W**
PROPOSED REJECT.

Unclear why / what in the indicated text is unclear.

Cl **165**　　*SC* **165.5.3.2**　　　*P* **110**　　*L* **5**　　　# 563

Ran, Adee   Cisco

Comment Type　**T**　　*Comment Status*　**D**　　　　　　　*EZ*

"SNDR distortion" - the "D" in SNDR stands for distortion.

SuggestedRemedy

Delete "distortion".

Proposed Response　　　*Response Status*　**W**
PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general　　　　　*Cl*　**165**　　　Page 59 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn　　*SC*　**165.5.3.2**　　　8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165** *SC* **165.5.3.3** *P* **110** *L* **25** # 564

Ran, Adee   Cisco

Comment Type **T** *Comment Status* **D**   *EZ*

"Time Interval Error" - capitalization is not needed.

Also in 165.5.3.3.1 (line 36).

SuggestedRemedy

Change to lower case.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.5.3.4** *P* **112** *L* **25** # 459

John Abbott   Corning Incorporated

Comment Type **T** *Comment Status* **D**   *EZ*

In comparing equations 165-12 and 165-13 to clause 149, it seems to me that the lower frequency limit "5" in equation 165-13 should scale as one goes from 2.5 to 5 to 10 to 25Gb/s, since every other limit in clause 165 is the 149 limits x 2.5 (i.e. 25Gb/s = 2.5 * 10Gb/s).   However, "5" was used in clause 149 for 2.5,5,10.

SuggestedRemedy

scale "5 MHz" in 165-13 if appropriate. Thank you!

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Unclear what the actual issue is. Equation 165-13 is already defined from 5 MHz up.

Cl **165** *SC* **165.5.3.6** *P* **110** *L* **37** # 567

Ran, Adee   Cisco

Comment Type **T** *Comment Status* **D**   *EZ*

Is there no specification for the Tx clock frequency of the SLAVE PHY?

At the minimum, the short-term rate of variation of the SLAVE transmitter when the MASTER is in LPI mode should be specified - just as it is specified for the MASTER (and for similar reasons) - likely, the same maximum rate can be used.

It may also be helpful to state that when the master is not in LPI transmit mode, the SLAVE PHY frequency is equal to that of the MASTER due to loop timing.

SuggestedRemedy

Per comment

Proposed Response *Response Status* **W**

PROPOSED REJECT.

No changes to text proposed.

Cl **165** *SC* **165.5.4.1** *P* **110** *L* **52** # 568

Ran, Adee   Cisco

Comment Type **T** *Comment Status* **D**

BER can't be 1e-12 after RS-FEC decoding (As stated in some other comments), and especially it can't be a "shall" on the receiver's input signals…

Also in 165.5.4.2.

SuggestedRemedy

Change BER to RS-FEC frame error rate, with the appropriate value.
Change "shall be received" to "are expected to be decoded".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "shall be received" to "are expected to be decoded". Update PICS as needed.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **165** Page 60 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **165.5.4.1** 8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.5.4.2**   *P* **114**   *L* **19**   # 472

Simms, Bill   NVIDIA

Comment Type **E**   *Comment Status* **D**   *EZ*

in figure 165.36, inclear what <0.5m refers to

SuggestedRemedy

define 0.5m either in text or in notes for figure

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add an arrow between Differential directional coupler and Receiver and mark is as "<0.5m"

Cl **165**   *SC* **165.5.4.2**   *P* **114**   *L* **30**   # 510

Sedarat, Hossein   Ethernovia

Comment Type **TR**   *Comment Status* **D**

The added noise level and bandwidth are taken from 802.3ch as-is and are not correct for 802.3cy where the signaling bandwidth is 2.5x wider.

SuggestedRemedy

In table 165-14: Replace 3500 MHz with 8750 MHz (=3500*2.5), and replace -152 dBm/Hz with -156 dBm/Hz (to maintain the same noise power over the new bandwidth)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.5.5**   *P* **114**   *L* **35**   # 734

DiMinico, Christopher   MC Communications

Comment Type **T**   *Comment Status* **D**   *post-deadline*

165.5.5 Test fixture specifications should have same frequency range. The frequency range should be consistent with what's tested. The host test fixture is used to measure the MDI RL (5 MHz</=f</=10000 MHz) and the link segment test fixture is used to validate host test fixture therefore the test fixture specifications should be at least 5 MHz</=f</=10000 MHz based on D2.0. This range would not include margin between test fixture and DUT therefore I suggest keeping the minimum of 1 MHz consistent with 165.5.5.1 and 165.5.5.2 for all test fixture specifications.

My comment is to address the test fixture minimum frequency. The max frequency should be addressed with the MDI RL max.

SuggestedRemedy

In 165.5.5.3.1 Insertion loss equation(165–17) and (165–18) change min frequency to 1 MHz.

In 165.5.5.3.2 Return loss equation(165–20)change min frequency to 1 MHz also include frequency range in this subclause line 10.

In 165.5.5.3.3 Mode Conversion equation(165–21)change min frequency to 1 MHz.

In 165.5.5.3.4 Crosstalk equation(165–22)change min frequency to 1 MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

In 165.5.5.3.1 Insertion loss equation(165–17) and (165–18) change min frequency to 1 MHz.

In 165.5.5.3.2 Return loss equation(165–20)change min frequency to 1 MHz

In 165.5.5.3.3 Mode Conversion equation(165–21)change min frequency to 1 MHz.

In 165.5.5.3.4 Crosstalk equation(165–22)change min frequency to 1 MHz.

Cl **165**   *SC* **165.5.5.1**   *P* **114**   *L* **50**   # 723

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *post-deadline, EZ*

Unless there is specific meaning in multiplying with the exact number 0.3334, it would be better to include this multiplication in the coefficients of the equation, or alternatively use divide by 3.

SuggestedRemedy

Change 0.09144 to 0.030480, 0.51054 to 0.17018, and remove "x0.3334" in equation (165-15). Same change should be made to equation (165-16), if it is not removed (see separate comment).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **165**
SC **165.5.5.1**

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8/15/2022 3:27:58 PM

Cl **165** *SC* **165.5.5.1** *P* **115** *L* **3** # 436

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **D**   *EZ*

awkward working

SuggestedRemedy

Change: The reference insertion loss of the TP2 or TP3 test fixtures
To: The reference insertion loss at TP2 or TP3 of the HTF

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.5.5.2** *P* **115** *L* **32** # 697

Jonsson, Ragnar Marvell

Comment Type **E** *Comment Status* **D** *post-deadline, EZ*

Equation (165-16) is identical to (165-15), apart from subscript of "lstfref" instead of "htfref".
It would simplify/clarify the spec to define only one "tfref" limit.

SuggestedRemedy

Eliminate equation (165-16) and change "htfref" in equation (165-15) to "tfref"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.7** *P* **118** *L* **4** # 570

Ran, Adee Cisco

Comment Type **T** *Comment Status* **D**   *EZ*

The first sentence says "single shielded balanced pair of conductors", the second says
"single pair of shielded, balanced conductors".

Either use consistent language, or say it once.

I assume it is the pair that is shielded (not each conductor), and it is also balanced.
"Single" goes without saying because it is "pair", not "pairs".

Also, the term "link segment" appears in the heading but not in the text.

SuggestedRemedy

Change the text to

25GBASE-T1 is designed to operate over link segments compring a shielded balanced pair
of conductors that meet the requirements specified in this subclause. This link segment
supports an effective data rate of 25 Gb/s in each direction simultaneously.

Change "link segment pair" to "link segment" across the draft.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to T

Cl **165** *SC* **165.7.1.1** *P* **118** *L* **18** # 698

Jonsson, Ragnar Marvell

Comment Type **E** *Comment Status* **D** *post-deadline, EZ*

The subscript "MHz" is inconsistent with other notations for "f" in this section, and it is
inconsistent with line 23 and the first use of "f" in equation (165-23)

SuggestedRemedy

Remove the subscripot "MHz" from "f" in equation (165-23)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **165** Page 62 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **165.7.1.1** 8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165** *SC* **165.7.1.1** *P* **118** *L* **18** # 571

Ran, Adee   Cisco

Comment Type **E** *Comment Status* **D**   *EZ*

In equation 165-23, f is defined "in MHz", so there is no need to have "MHz" in the equation; f_MHz is undefined.

SuggestedRemedy

Changfe "f_MHz" to "f" in the equation.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.7.1.1** *P* **118** *L* **22** # 460

John Abbott   Corning Incorporated

Comment Type **T** *Comment Status* **D**   *10G*

In comparing section 165.7 in clause 165 to section 149.7 in clause 149, clause 149 has a max frequency Fmax = 4000*S (equation 149-17) where S=1 for 10Gb/s and S would = 2.5 for 25Gb/s. Hence clause 149 would lead one to think clause 165 should have Fmax=2.5*4000 = 10,000MHz., rather than 9000MHz in equation 165-23 and elsewhere.

SuggestedRemedy

Change 9000 to 10,000 in section 165.7.1.1 and elsewhere as appropriate (if there is a reason to use 9000 instead of 10,000 -- maybe that number should be even lower ?) Thank you!

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165** *SC* **165.7.1.1** *P* **118** *L* **27** # 572

Ran, Adee   Cisco

Comment Type **T** *Comment Status* **D**

"The insertion loss is illustrated in Figure 165–40"

Figure 165-40 does not illustrate an insertion loss of any link segment. It illustrates the limit imposed by equation 165-23.

SuggestedRemedy

Change the first sentence to "The insertion loss of a 25GBASE-T1 link segment shall meet Equation (165–23) as illustrated in Figure 165-40".

In the figure add a label "meets equation constraints" above the curve, and change the title to "Link segment insertion loss limit".

Delete the quoted sentence.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per comment. Update PICS as needed.

Cl **165** *SC* **165.7.1.1** *P* **118** *L* **Figure** # 593

Stephan Schreiner   Rosenberger Hochfrequenztechnik

Comment Type **E** *Comment Status* **D**   *EZ*

X-Axes Grid is very dense.

SuggestedRemedy

Using a frequency step of 500 MHz for the grid instead of 250 MHz.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **165** Page 63 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **165.7.1.1** 8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.1.2**   *P* **119**   *L* **3**   # 573

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

The differential charateristic impedance should apply to the insertion loss specification, so it should appear before 165.7.1.1.

This statement does not need a standalone subclause, it can be added to 165.7.1.

Also, the statement is repeated in 165.7.1.3.1.

SuggestedRemedy

Move the content of this subclause to 165.7.1 and delete this subclause heading.

Delete the sentence "The reference impedance for the return loss specification is 100 Ω" in 165.7.1.3.1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3**   *P* **119**   *L* **5**   # 574

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**

The term "Return loss" is strictly adequate for the content of 165.7.1.3.1.

The other subclauses under 165.7.1.3 discuss parameters that are dependent on reflections as well as insertion loss between them, so they should not be grouped under "Return loss". This hierarchy should be flattened.

SuggestedRemedy

Delete the subclause heading of 165.7.1.3.1, merging its content into 165.7.1.3 "Return loss".

Promote subclauses 165.7.1.3.2 through 165.7.1.3.4 in the hierarchy to become 165.7.1.4 through 165.7.1.6.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.1**   *P* **119**   *L* **23**   # 575

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Font size mismatch in "30<=f<=9000".
Also in 165.7.1.3.1 and in 165.7.1.4.

SuggestedRemedy

Correct the font size

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.1**   *P* **119**   *L* **Figure**   # 594

Stephan Schreiner   Rosenberger Hochfrequenztechnik

Comment Type **E**   *Comment Status* **D**   *EZ*

X-Axes grid starts at 1 MHz, which is different to the figures before and after.Additionally, the X-Axis Grid is very dense.

SuggestedRemedy

Start the frequency grid at 0 MHz and use a frequency step of 500 MHz for the grid instead of 250 MHz

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.1**   *P* **119**   *L* **Figure**   # 595

Stephan Schreiner   Rosenberger Hochfrequenztechnik

Comment Type **E**   *Comment Status* **D**   *EZ*

There is a vertical blue line at the 1 MHz position.

SuggestedRemedy

Remove the vertical blue line at the 1 MHz position.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 64 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.1.3.1**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.1.3.2**   *P* **120**   *L* **1**   # 699

Jonsson, Ragnar   Marvell

Comment Type   **E**   *Comment Status*   **D**   *post-deadline, EZ*
the word "Noise" should not be captialized

SuggestedRemedy
Change "Noise" to "noise".

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.2**   *P* **120**   *L* **6**   # 439

Wienckowski, Natalie   General Motors

Comment Type   **E**   *Comment Status*   **D**   *EZ, Table 165-15*
The table needs a title

SuggestedRemedy
Table 165-15-Echo Metrics Parameters

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.2**   *P* **120**   *L* **6**   # 579

Ran, Adee   Cisco

Comment Type   **E**   *Comment Status*   **D**   *EZ, Table 165-15*
The title of Table 165-15 seems like a placeholder.

SuggestedRemedy
Use an appropriate title.

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #439

Cl **165**   *SC* **165.7.1.3.2**   *P* **120**   *L* **6**   # 392

Marris, Arthur   Cadence Design Systems

Comment Type   **ER**   *Comment Status*   **D**   *EZ, Table 165-15*
XXX

SuggestedRemedy
Change name of "Table 165–15—XXX" to something more meaningful

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #439

Cl **165**   *SC* **165.7.1.3.2**   *P* **120**   *L* **6**   # 464

Hidaka, Yasuo   Credo Semiconductor, Inc.

Comment Type   **E**   *Comment Status*   **D**   *EZ, Table 165-15*
Missing caption of table 165-15.

SuggestedRemedy
Add a table caption such as "Parameters of echo metrics."

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT IN PRINCIPLE.

See comment #439

Cl **165**   *SC* **165.7.1.3.2**   *P* **120**   *L* **47**   # 580

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status*   **D**
What is K in equation 165-27?
Table 165-15 has N but not K. Should it be N?

SuggestedRemedy
Correct if necessary.

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT.

Change to N

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 65 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.1.3.2**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.1.3.2**   *P* **121**   *L* **9**   # 581

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Equations 165-30, 165-31, 165-33 may need some tidying up - some letters are too small to be seen, others (like the subscript k in 165-31) are too large. The Sigma signs are too small and unaligned with the rest of the equations.

SuggestedRemedy

Improve if possible

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Editor will attempt to increase the equation size. They were already drawn as large equations at this time.

Cl **165**   *SC* **165.7.1.3.2**   *P* **121**   *L* **13**   # 582

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Equation variable hn should be formatted as in the equation.

Also for Pr in step 4

SuggestedRemedy

Apply italic and subscript formats as necessary.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.2**   *P* **121**   *L* **13**   # 700

Jonsson, Ragnar   Marvell

Comment Type **E**   *Comment Status* **D**   *post-deadline, EZ*

the "n" in "hn" should be subscript

SuggestedRemedy

Change "n" in "hn" to subscript

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.2**   *P* **121**   *L* **36**   # 704

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline*

After the latest updates to the ETM algorithm, the REM and ETM calculations have become too different to be described in one sequence of calculation steps. Therefore, they should be separated into two separate sections.

SuggestedRemedy

Create a new sub-section titled "Calculating the Residual Echo Metric (REM)" that includes steps 1 through 5. Create another sub-section titled "Calculating Echo Tail Metric (ETM)" containing steps 6 through 8.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.7.1.3.2**   *P* **122**   *L* **1**   # 583

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Equation 165-36 needs some tidying up. Some letters are too small to be seen. The Sigma signs are too small and unaligned with the rest of the equations.

The delay is only required for setting the span of the residual echo, and the final result should not be very sensitive to this estimate. Therefore perhaps the process of estimating the propagation delay in a cable does not require such a detailed equation. It can be done, e.g. using the length of the cable and an approximate speed of light in the medium, or using "group delay" which is a readily available from measurements.

SuggestedRemedy

Tidy up the equation or replace it with less prescriptive text.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Editor will attempt to increase the equation size. They were already drawn as large equations at this time.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 66 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.1.3.2**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.1.3.2**   *P* **122**   *L* **21**   *#* 701
Jonsson, Ragnar   Marvell
Comment Type   **T**   *Comment Status* **D**   *post-deadline*
The "RE_k" value in (165-38) is different from the "RE_k" value defined in (165-32), which
is both misleading an confusing. It would be more appropriate to use "PE_k" for partial
echo response.

SuggestedRemedy
Change "RE_k" in (165-38) to "PE_k"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.7.1.3.2**   *P* **122**   *L* **24**   *#* 584
Ran, Adee   Cisco
Comment Type   **T**   *Comment Status* **D**   *EZ*
Missing value in the third case of equation 165-38.
I assume the value should be 0.

SuggestedRemedy
Add "0" for the third case.

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.2**   *P* **122**   *L* **26**   *#* 585
Ran, Adee   Cisco
Comment Type   **T**   *Comment Status* **D**   *g_n^m*
Step 8 mentions "partial response g_n^m" but I don't see where that is defined.

SuggestedRemedy
Add a reference to where g_n^m is defined, or define it if it isn't.

Proposed Response   *Response Status* **W**
PROPOSED REJECT.

No specific definition provided. Discussion needed at the meeting.

Cl **165**   *SC* **165.7.1.3.2**   *P* **122**   *L* **26**   *#* 703
Jonsson, Ragnar   Marvell
Comment Type   **T**   *Comment Status* **D**   *post-deadline*
The REM and ETM are no longer the same values (as they used to be in previous version
of the ETM algorithm), so wording in Step 8 needs to be clarified.

SuggestedRemedy
Change "associated REM. The ETM(m) is this REM evaluated at Ndiscard_etm." to
"associated ETM."

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.7.1.3.2**   *P* **122**   *L* **26**   *#* 702
Jonsson, Ragnar   Marvell
Comment Type   **T**   *Comment Status* **D**   *post-deadline, g_n^m*
The signal "g_n^m" is not defined anywhere.

SuggestedRemedy
Add definition of "g_n^m"

Proposed Response   *Response Status* **W**
PROPOSED REJECT.

No specific definition provided. Discussion needed at the meeting.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.7.1.3.3**   *P* **122**   *L* **29**   *#* 586
Ran, Adee   Cisco
Comment Type   **E**   *Comment Status* **D**   *EZ*
Unnecessary capitalization in "Residual Echo Metric". Also, the acronym REM has already
been introduced in 165.7.1.3.2.

SuggestedRemedy
Remove the unnecessary capitalization and delete "(REM)".

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 67 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.1.3.3**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.1.3.4**   *P* **122**   *L* **45**   # 587

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Unnecessary capitalization in "Echo Tail Metric".

Also, the acronym ETM should be defined where it is first used in text, which is in step 8 of 165.7.1.3.2.

SuggestedRemedy

Remove the unnecessary capitalization and delete "(ETM)".

In step 8 of 165.7.1.3.2, change "The ETM(m) is this REM" to "The echo tail metric (ETM) of segment m, ETM(m), is this REM".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.3.4**   *P* **122**   *L* **50**   # 588

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   *EZ*

The text is about ETM but the equation has REM(N_discard), and no ETM limit is defined.

SuggestedRemedy

Correct as necessary.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

No specific text proposed at this time.

Cl **165**   *SC* **165.7.1.4**   *P* **119**   *L* **24**   # 577

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

"The coupling attenuation is illustrated in Figure 165–42"

Figure 165-42 does not illustrate a coupling of any link segment. It illustrates the limit imposed by equation 165-41.

SuggestedRemedy

Change "the 25GBASE-T1 link segment shall meet the coupling attenuation values determined by using Equation (165–41)"
to
"the coupling attenuation of a 25GBASE-T1 link segment shall meet the coupling attenuation in Equation (165–41) as illustrated by Figure 165-42".

In the figure add a label "meets equation constraints" below the curve, and change the title to "Link segment coupling attenuation limit".

Delete the quoted sentence.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.4**   *P* **123**   *L* **6**   # 440

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**

Annex 165A does not define the Coupling and screening attenuation test methodology. As this is the same as it was for Clause 149, Annex 149A should be referenced.

SuggestedRemedy

Change: Annex 165A
To: Annex 149A (This should be in green with no hyperlink.)
Also P124L2

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 68 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.1.4**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.1.4**   *P* **123**   *L* **Figure**   # 596

Stephan Schreiner   Rosenberger Hochfrequenztechnik

Comment Type **E**   *Comment Status* **D**   EZ

X-Axes Grid is very dense.

SuggestedRemedy

Using a frequency step of 500 MHz for the grid instead of 250 MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.5**   *P* **123**   *L* **54**   # 705

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, 9GHz*

The screening attenuation should be defined up to 9GHz

SuggestedRemedy

Change "4000" to "9000".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.1.5**   *P* **123**   *L* **54**   # 457

Brychta, Michal   Analog Devices

Comment Type **T**   *Comment Status* **D**   9GHz

Many other specifications in subclause 165.7 cover bandwidth up to 9000MHz. That
includes for for example 165.7.1.4 Coupling attanuation. Is there a reason why the
screening attenuation should be specified "only" in range up to 4000 MHz?

SuggestedRemedy

Consider if screening attanuation could be / should be specified up to 9000MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Change 4000MHz to 9000MHz

Cl **165**   *SC* **165.7.1.6**   *P* **124**   *L* **6**   # 651

McClellan, Brett   Marvell

Comment Type **TR**   *Comment Status* **D**

The max link delay should be scaled for 11 meters, vs the original 15 meters in 802.3cy

SuggestedRemedy

change 94ns to 69ns

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.2**   *P* **124**   *L* **18**   # 441

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   EZ

Incorrect reference, 165C.5 doesn't exist.

SuggestedRemedy

Change: 165C.5
To: 165A.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.2**   *P* **124**   *L* **18**   # 650

McClellan, Brett   Marvell

Comment Type **E**   *Comment Status* **D**   EZ

incorrect reference

SuggestedRemedy

change 165C.5 to 165A.5

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 69 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.2**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.7.2.1**   *P* **124**   *L* **25**   # 442

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   *EZ*

The frequency range used needs to be changed.

SuggestedRemedy

Change: The power ANEXT loss is derived using Equation (97–25).
To: The PSANEXT loss is derived using Equation (97–25) over the frequency range defined for Equation (165-42).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.2.1**   *P* **124**   *L* **35**   # 474

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **TR**   *Comment Status* **D**   *9GHz*

The upper frequency for ANEXT and AFEXT should be at least as high as with the link segment upper frequency.

SuggestedRemedy

Change 4000 to 9000 on P124 L35 and P126 L6. (equations 165-42 and 165-43)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.2.1**   *P* **125**   *L* **1**   # 589

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**

"PSANEXT is illustrated in Figure 165–43"

Figure 165-43 does not illustrate any PSA. It illustrates the limit imposed by equation 165-42.

Also for PSAACRF in 165.7.2.2.

Also for MDI return loss in 165.8.2.1.

SuggestedRemedy

Change "shall meet the values determined using Equation (165–42)"
to
"shall meet Equation (165–42) as illustrated by Figure 165-43".

In the figure add a label "meets equation constraints" below the curve, and change the title to "PSANEXT limit".

Delete the quoted sentence.

Apply similarly in 165.7.2.2 and in 165.8.2.1, with apppropriate adjustments.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per comment. Update PICS as needed.

Cl **165**   *SC* **165.7.2.2**   *P* **125**   *L* **36**   # 443

Wienckowski, Natalie   General Motors

Comment Type **T**   *Comment Status* **D**   *EZ*

The frequency range used needs to be changed.

SuggestedRemedy

Change: The power AACRF is derived using Equation (97–27).
To: The PSAACRF is derived using Equation (97–27) over the frequency range defined for Equation (165-43).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

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

Cl **165**
SC **165.7.2.2**

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Cl **165**   *SC* **165.7.3.1**   *P* **119**   *L* **24**   # 576

Ran, Adee   Cisco

Comment Type   **T**   *Comment Status* **D**

"The 25GBASE-T1 return loss is illustrated in Figure 165–41"

Figure 165-41 does not illustrate a return loss of any link segment. It illustrates the limit imposed by equation 165-24.

SuggestedRemedy

Change "each 25GBASE-T1 link segment pair shall meet the values determined by using Equation (165–24) at all frequencies from 30 MHz to 9000 MHz"
to
"the return loss of a 25GBASE-T1 link segment
shall meet Equation (165–24) as illustrated in Figure 165-44".

In the figure add a label "meets equation constraints" below the curve, and change the title to "Link segment return loss limit".

Delete the quoted sentence.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Changes per comment. Update PICS as needed.

Cl **165**   *SC* **165.7.3.2**   *P* **119**   *L* **53**   # 578

Ran, Adee   Cisco

Comment Type   **E**   *Comment Status* **D**   *EZ*

Unnecessary capitalization in "Echo Tail and Residual Echo Metrics". Also "Noise" in the subclause text.

SuggestedRemedy

Remove the unnecessary capitalization.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.12.1**   *P* **124**   *L* **36**   # 706

Jonsson, Ragnar   Marvell   *post-deadline, 9GHz*

Comment Type   **T**   *Comment Status* **D**   *post-deadline, 9GHz*

The PSANEXT should be defined up to 9GHz

SuggestedRemedy

Change "4000" to "9000".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.12.1**   *P* **125**   *L* **23**   # 707

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, 9GHz*

The PSANEXT should be defined up to 9GHz

SuggestedRemedy

Expand Figure 165-43 from 4000MHz to 9000MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.12.2**   *P* **126**   *L* **6**   # 708

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, 9GHz*

The PSAACRF should be defined up to 9GHz

SuggestedRemedy

Change "4000" to "9000".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.7.12.2**   *P* **126**   *L* **31**   # 709

Jonsson, Ragnar   Marvell

Comment Type   **T**   *Comment Status* **D**   *post-deadline, 9GHz*

The PSAACRF should be defined up to 9GHz

SuggestedRemedy

Expand Figure 165-44 from 4000MHz to 9000MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 71 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.7.12.2**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.8.2.1**   *P* **126**   *L* **7**   # 458

Brychta, Michal   Analog Devices

Comment Type **T**   *Comment Status* **D**   10G

The MDI return loss here is specified up to 10000 MHz. Most of the specifications in subclause 165.7 use frequency range up to 9000MHz.May it be better to unify the relevant frequency range upper end in 165.7 and 165.8 on the same number, or is there a reason why they should be different?

SuggestedRemedy

Use for relevant 165.7 and 165.8 specifications frequency range either up to 9000MHz, or up to 10000MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Use 10GHz consistently

Cl **165**   *SC* **165.8.2.1**   *P* **127**   *L* **4**   # 465

Tu, Mike   Broadcom

Comment Type **TR**   *Comment Status* **D**

Equation 165-44 for the MDI return loss is too restrictive for practical PHY designs. Also need to set the maximum frequency to 9GHz instead of 10GHz.

SuggestedRemedy

See proposed limits in "vakilian_3cy_ 01_08_16_2022.pdf"

Proposed Response   *Response Status* **W**

PROPOSED REJECT.

I am unable to locate the referenced presentation

Cl **165**   *SC* **165.8.2.1**   *P* **127**   *L* **Figure**   # 597

Stephan Schreiner   Rosenberger Hochfrequenztechnik

Comment Type **E**   *Comment Status* **D**   EZ

X-Axes Grid is very dense.

SuggestedRemedy

Using a frequency step of 500 MHz for the grid instead of 250 MHz.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.8.2.1**   *P* **127**   *L* **Figure**   # 598

Stephan Schreiner   Rosenberger Hochfrequenztechnik

Comment Type **E**   *Comment Status* **D**   EZ

There is a vertical blue line at the 0 MHz position.

SuggestedRemedy

Remove the vertical blue line at the 1 MHz position.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.10**   *P* **129**   *L* **5**   # 590

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   L

Here there are different maximum delay specifications depending on the "Interleave" parameter. Interleaving (or "L") is negotiated between the link partners and may be different in either direction, so is unknown in advance for a given device.

The purpose of this table (per the text preceding it: "network planners and administrators conform to constraints regarding the cable topology and concatenation of devices".

The normative requirement "The sum of the transmit and receive data delays for an implementation of the PHY shall not exceed the limits shown in Table 165–16" is irrelevant with different values of interleave in the transmit and receive directions. The maximum delay happens when both sides choose L=8; if it is known that in a specific link the choices are different, the constraints can be tightened.

Therefore it seems adequate to have a normative requirement only for the maximum delay of the PHY, which happens with L=8.

Text can be added to explain that the actual delay may be lower if either or both partners requests a lower value of L, assuming this information is available to network management.

SuggestedRemedy

Delete the first three rows in Table 165-16, leaving only the one with Interleave value of 8, and remove the "Interleave" column.

Add explanatory text as in the comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Delete the first three rows in Table 165-16, leaving only the one with Interleave value of 8, and remove the "Interleave" column.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 72 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.10**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**   *SC* **165.11.2.2**   *P* **130**   *L* **36**   # 445

Wienckowski, Natalie   General Motors

Comment Type **E**   *Comment Status* **D**   *EZ*

typo

SuggestedRemedy

Change: IEEE Std 802.3ch-2020,
To: IEEE Std 802.3cy-202x,

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.11.2.2**   *P* **130**   *L* **36**   # 591

Ran, Adee   Cisco

Comment Type **E**   *Comment Status* **D**   *EZ*

Incorrect amendment name.

SuggestedRemedy

Change "ch-2020" to "cy-202x".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.11.2.2**   *P* **130**   *L* **44**   # 450

Carlson, Steve   HSD, Bosch, Ethernovia

Comment Type **E**   *Comment Status* **D**   *EZ*

Incorrect citation

SuggestedRemedy

Change: IEEE Std 802.3ch-2020,
To: IEEE Std 802.3cy-202x,

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.11.4.1**   *P* **131**   *L* **39**   # 592

Ran, Adee   Cisco

Comment Type **T**   *Comment Status* **D**   *EZ*

Item G3 status should be "!AN:M".

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165**   *SC* **165.11.4.2.5**   *P* **135**   *L* **30**   # 722

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline*

Alert happens at the fifth frame after 8 frame boundary.

SuggestedRemedy

Change "beginning of" to "fifth frame after".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Comment type changed to non-R due to post-deadline status.

Cl **165**   *SC* **165.11.4.2.6**   *P* **136**   *L* **6**   # 731

Jonsson, Ragnar   Marvell

Comment Type **T**   *Comment Status* **D**   *post-deadline, partial frame*

Sleep signal should be composed of 16 RS frames

SuggestedRemedy

change "eight RS-FEC frame" to "sixteen RS-FEC frame"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

See comment #710 for justification

Comment type changed to non-R due to post-deadline status.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165**   Page 73 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165.11.4.2.6**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165**　　*SC* **165.11.4.2.8**　　　　*P* **137**　　*L* **1**　　　# 446

Wienckowski, Natalie　　　　　　　　General Motors

Comment Type **T**　　　*Comment Status* **D**　　　　　　　　　　　*EZ*

Table 149-1 has nothing to do with the OAM state diagrams.

SuggestedRemedy

Change: Table 149-1
To: Figure 149-24

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **165**　　*SC* **165.11.4.2.8**　　　　*P* **137**　　*L* **6**　　　# 468

Tu, Mike　　　　　　　　　　　　Broadcom

Comment Type **TR**　　　*Comment Status* **D**　　　　　　　　　　*EZ*

The OAM state diagrams are shown in Figure 149-24 and Figure 149-25.

SuggestedRemedy

Change from "Table 149-1 and Figure 149-25" to "Figure 149-24 and Figure 149-25".

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **165**　　*SC* **165.11.4.3.3**　　　　*P* **139**　　*L* **10**　　　# 339

Maguire, Valerie　　　　　　　　　Copperopolis

Comment Type **E**　　　*Comment Status* **D**　　　　　　　　　　*EZ*

Interface is capitalized when appearing after "MDIO" (see clause 45 header).

SuggestedRemedy

Replace, "MDIO interface" with "MDIO Interface"

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**　　*SC* **165A**　　　　*P* **149**　　*L* **1**　　　# 444

Wienckowski, Natalie　　　　　　　　General Motors

Comment Type **E**　　　*Comment Status* **D**　　　　　　　　　　*EZ*

There is no Annex 165B.

SuggestedRemedy

Change: Insert new Annex 165A and Annex 165B as follows:
To: Insert new Annex 165A as follows:

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**　　*SC* **165A**　　　　*P* **149**　　*L* **43**　　　# 632

McClellan, Brett　　　　　　　　　Marvell

Comment Type **E**　　　*Comment Status* **D**　　　　　　　　　　*EZ*

HTF used without definition in this Annex

SuggestedRemedy

replace 'HTF' with 'Host Test Fixture (HTF)'

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**　　*SC* **165A.1**　　　　*P* **149**　　*L* **30**　　　# 406

Wienckowski, Natalie　　　　　　　　General Motors

Comment Type **T**　　　*Comment Status* **D**　　　　　　　　　　*EZ*

The objective is 25 Gb/s up to 2 inline connectors for at least 11 m.
The drawing is correct, but the text on the link segment in Figure 165A-1 is not.

SuggestedRemedy

Change: four in-line connectors
To: two in-line connectors

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general　　　　*Cl* **165A**　　Page 74 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn　　*SC* **165A.1**　　8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165A**   *SC* **165A.1**   *P* **149**   *L* **30**   # 676

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **TR**   *Comment Status* **D**

There are only 2 in-line connectors in a clause 165 link segment, the figure says 4. Also, the wording could be improved in the label.

SuggestedRemedy

Change "SPE P-to-P link segments four in-line connectors up to at least 11m" to "Clause 165 link segment (up to 2 in-line connectors and up to at least 11m length)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**   *SC* **165A.1**   *P* **149**   *L* **32**   # 678

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T**   *Comment Status* **D**

It is not clear where the "PHY ends" in the figure - there is an interface point defined, but not labeled. It doesn't really matter in the figure though or to the content of the annex.

SuggestedRemedy

Suggest deleting the dotted vertical lines on the very left and right sides of the figure (the unlabeled interface plane)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Delete the dotted vertical lines on the very left and right sides of the figure (the unlabeled interface plane)

Cl **165A**   *SC* **165A.1**   *P* **149**   *L* **33**   # 677

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **TR**   *Comment Status* **D**

"Channel" is ambiguous (there are many different test points and reference losses in the annex), and is referenced differently in the text of 165A.3. Align the figure with the text.

SuggestedRemedy

Change "Channel" to "TP0 to TP5 Channel"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**   *SC* **165A.2.1**   *P* **150**   *L* **16**   # 679

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **ER**   *Comment Status* **D**

There are 3 different wordings for what is being recommended here, but they appear to be the same thing. "recommended maximum insertion loss for the Host PCB", "recommended printed circuit board insert loss", and "recommended maximum insertion loss" - it appears that these are all "recommended maximum insertion loss from TP0/TP5 to the host-side PCB connection of the MDI".

SuggestedRemedy

Change "The recommended maximum insertion for the Host PCB loss is" to "The recommended maximum insertion loss from TP0/TP5 to the host-side PCB connection of the MDI is" on line 16,
Change "The recommended printed circuit board trace insertion loss is based on a 76.2 mm trace length. The recommended maximum insertion loss is" to "This maximum recommended loss is based on a 76.2 mm trace length, and is"
Similarly change the wording on line 29 for the "recommended minimum insertion loss" on lines 27, 28, and 30

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**   *SC* **165A.2.1**   *P* **150**   *L* **25**   # 680

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E**   *Comment Status* **D**   *EZ*

font size problem in the frequency span, and missing period. Same problems on lines 25 and 36, and on page 151 line 2.

SuggestedRemedy

Fix the font size for "9000" and add a period to the end of the sentence. (3 instances)

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A**   *SC* **165A.2.1**   *P* **150**   *L* **32**   # 633

McClellan, Brett   Marvell

Comment Type **T**   *Comment Status* **D**

the Host PCB insertion loss should be greater than the minimum requirement

SuggestedRemedy

change <= to >=

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **165A**   Page 75 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **165A.2.1**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **165A** *SC* **165A.4**   *P* **151**   *L* **19**   # 682

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **TR** *Comment Status* **D**

This section does NOT describe any 'Channel' return loss, but rather describes the models used for the Tx/Rx function to MDI return loss (equivalent of 149C.4.1).

SuggestedRemedy

Change the title of 165A.4 to "Example models for Tx/Rx function to MDI return loss"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A** *SC* **165A.4**   *P* **151**   *L* **20**   # 681

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **T** *Comment Status* **D**   *EZ, Figure 165A-3*

The figure referenced (149C-2) is identical to the figure (unreferenced) in the draft, and moreover, adds no value as it is a simple concatenation of words, already stated clearly in the text.

SuggestedRemedy

delete "illustrated in Figure 149C-2" and delete Figure 165A-3

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A** *SC* **165A.4**   *P* **151**   *L* **20**   # 634

McClellan, Brett   Marvell

Comment Type **E** *Comment Status* **D**   *EZ, Figure 165A-3*

incorrect reference

SuggestedRemedy

change 'Figure 149C-2' to 'Figure 165A-3'

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #681

Cl **165A** *SC* **165A.4**   *P* **151**   *L* **41**   # 635

McClellan, Brett   Marvell

Comment Type **E** *Comment Status* **D**   *EZ*

Element column entries should use subscripts

SuggestedRemedy

copy the subscript format from Table 149C-2, fix the micro symbol in the Unit column

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A** *SC* **165A.5**   *P* **152**   *L* **3**   # 683

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **ER** *Comment Status* **D**

We removed the 'laning' but forgot it here.

SuggestedRemedy

Change "When multiple 25GBASE-T1 lanes/PHYs are implemented" to "When multiple ports of 25GBASE-T1 are implemented"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **165A** *SC* **165A.5**   *P* **152**   *L* **6**   # 684

Zimmerman, George   CME Consulting/APL Gp, Cisco, CommScope, Marve

Comment Type **E** *Comment Status* **D**   *EZ*

we say 'specified' twice

SuggestedRemedy

Change "than that specified for power sum alien near-end crosstalk specified in" to "than that specified for power sum alien near-end crosstalk in"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **165A** Page 76 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn *SC* **165A.5** 8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line

Cl **Particip** *SC* **Participants**   *P* **7**   *L* **11**   *#* 353

Fischer, Peter   BKS Kabel-Service AG

Comment Type   **E**   *Comment Status* **D**   *EZ*

Till when will be Valerie Maguire listed as Working Group Treasurer?

SuggestedRemedy

If a new Working Group Treasurer is available replace with the correct name, if not wait till the term has been officially ended.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Apply current template.

Cl **TOC**   *SC* **TOC**   *P* **13**   *L* **1**   *#* 661

Murty, Ramana   Broadcom

Comment Type   **E**   *Comment Status* **D**   *EZ*

It is good to add a heading and provide a bookmark to the page.

SuggestedRemedy

Add the heading "Contents" and provide a bookmark to the page.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Apply the latest template

Cl **TOC**   *SC* **TOC**   *P* **13**   *L* **10**   *#* 662

Murty, Ramana   Broadcom

Comment Type   **E**   *Comment Status* **D**   *EZ*

Add space between subclause number and text.

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Apply the latest template

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **TOC**   Page 77 of 77
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **TOC**   8/15/2022 3:27:58 PM
SORT ORDER: Clause, Subclause, page, line