

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

Cl 00 SC 0 P0 L0 # 346

Brown, Matt Huawei

Comment Type ER Comment Status A 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.

Response Response Status W

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 1 SC 1.4.128a P21 L8 # 373

Grow, Robert RMG Consulting

Comment Type TR Comment Status A

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.

Response Response Status W

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.

Cl 1 SC 1.4.473 P21 L17 # 344

Brown, Matt Huawei

Comment Type ER Comment Status A EZ

No editorial instruction.

SuggestedRemedy

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

Response Response Status W

ACCEPT.

Cl 1 SC 105.3 P37 L25 # 369

Grow, Robert RMG Consulting

Comment Type TR Comment Status A

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.

Response Response Status W

ACCEPT IN PRINCIPLE.

Remove 105.3.1 through 105.3.5

Cl 45 SC 45.2.1 P23 L8 # 386

Marris, Arthur Cadence Design Systems

Comment Type ER Comment Status A EZ

Why is Table 45-3 included if there are no changes?

SuggestedRemedy

Delete Table 45-3

Response Response Status W

ACCEPT.

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.1.214.2 P25 L11 # 377
 Grow, Robert RMG Consluting
 Comment Type **TR** Comment Status **R**
 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.
 Response Response Status **W**
 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 105 SC 105.1.1 P35 L7 # 360
 Grow, Robert RMG Consluting
 Comment Type **ER** Comment Status **A** 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.
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #408

Cl 105 SC 105.1.1 P35 L12 # 347
 Brown, Matt Huawei
 Comment Type **ER** Comment Status **A** 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
 Response Response Status **W**
 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/D2.2<<, 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 105.1.2 P35 L11 # 361
 Grow, Robert RMG Consluting
 Comment Type **ER** Comment Status **A** 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."
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #347

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

CI 105 SC 105.1.2 P35 L27 # 362
 Grow, Robert RMG Consluting
 Comment Type **TR** Comment Status **A** EZ, 25GBASE-T1 PCS
 The PCS type should be specified.
 SuggestedRemedy
 25GBASE-T1 PCS
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #452

CI 105 SC 105.1.2 P35 L37 # 453
 D'Ambrosia, John Futurewei, US Subsidiary of Huawei
 Comment Type **TR** Comment Status **A**
 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.
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 Figure 105-1 will be modified to match the stack in Figure 165-1.

CI 105 SC 105.1.2 P35 L37 # 452
 D'Ambrosia, John Futurewei, US Subsidiary of Huawei
 Comment Type **TR** Comment Status **A** EZ
 The stack for 25GBASE-T1 in Fig 105-1 does 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.
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 Redraw 25GBASE-T1 stack in Figure 105-1 to match Figure 165-1.

CI 105 SC 105.1.2 P35 L45 # 363
 Grow, Robert RMG Consluting
 Comment Type **ER** Comment Status **A** 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.
 Response Response Status **W**
 ACCEPT.

CI 105 SC 105.1.2 P35 L47 # 364
 Grow, Robert RMG Consluting
 Comment Type **ER** Comment Status **A** EZ, 105.1.2
 Insert second editorial instruction.
 SuggestedRemedy
 Insert new item at bottom of lettered list.
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #347

CI 105 SC 105.1.3 P35 L51 # 365
 Grow, Robert RMG Consluting
 Comment Type **ER** Comment Status **A** EZ, 105.1.3
 Missing editorial instruction. Unchanged text is included in draft without including all 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."
 Response Response Status **W**
 ACCEPT.

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

CI 105 SC 105.1.3 P36 L12 # 366
 Grow, Robert RMG Consluting
 Comment Type ER Comment Status A EZ, Table 105-1
 Missing editorial instruction.
 SuggestedRemedy
 Insert new row into Table 105-1 for 25GBASE-T1 after 25GBASE-T:
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 See comment #415

CI 105 SC 105.2 P37 L6 # 368
 Grow, Robert RMG Consluting
 Comment Type TR Comment Status A EZ
 As amendment 9, the table from P802.3cz should be used as base.
 SuggestedRemedy
 Include clause 166 column from P802.3cz/D2.2.
 Response Response Status W
 ACCEPT.

CI 105 SC 105.2 P37 L6 # 451
 D'Ambrosia, John Futurewei, US Subsidiary of Huawei
 Comment Type TR Comment Status A 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 "
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 For 25GBASE-T1 entry in Table 105-2, make the following:
 Clause 78 EEE - Optional
 Clause 106 RS - Mandatory
 Clause 106 25GMII - Optional
 Change title of 165 column to "25GBASE-T1 PCS/PMA "

CI 105 SC 105.2 P37 L11 # 462
 Lusted, Kent Intel Corporation
 Comment Type TR Comment Status A 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"
 Response Response Status W
 ACCEPT.

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

CI 105 SC 105.2 P37 L 20 # 463
 Lusted, Kent Intel Corporation
 Comment Type **TR** Comment Status **A** Table 105-2
 Table 105-2 entry "25GBASE-T1" does not include a row entry for 25GMII. The 25GMII should be an optional implementation for the Physical Layer type. Note that 25GMII is referenced in CI 165.1.2 (p40, line 37)
 SuggestedRemedy
 Mark the appropriate box for 25GMII with "O" for Optional
 Response Response Status **W**
 ACCEPT.

CI 105 SC 105.2 P37 L 20 # 461
 Lusted, Kent Intel Corporation
 Comment Type **TR** Comment Status **A** 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
 Response Response Status **W**
 ACCEPT.

CI 105 SC 105.3 P37 L 24 # 454
 D'Ambrosia, John Futurewei, US Subsidiary of Huawei
 Comment Type **ER** Comment Status **A** 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
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #625 and #626. Delete 105.3.1 and 105.3.5.

CI 105 SC 105.3 P37 L 26 # 349
 Brown, Matt Huawei
 Comment Type **ER** Comment Status **A** EZ
 No changes to 105.3.1 through 105.3.5"
 SuggestedRemedy
 Delete headings for 105.3.1 through 105.3.5.
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #625 and #626. Delete 105.3.1 and 105.3.5.

CI 105 SC 105.3.6 P37 L 40 # 350
 Brown, Matt Huawei
 Comment Type **ER** Comment Status **A** EZ
 When using "insert" instruction, no underline required.
 SuggestedRemedy
 Remove underline.
 Response Response Status **W**
 ACCEPT.

CI 105 SC 105.5 P37 L 46 # 351
 Brown, Matt Huawei
 Comment Type **ER** Comment Status **A** 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."
 Response Response Status **W**
 ACCEPT IN PRINCIPLE.
 See comment #370

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

Cl 105 SC 105.5 P37 L49 # 370
 Grow, Robert RMG Consluting
 Comment Type ER Comment Status A 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.
 Response Response Status W
 ACCEPT.

Cl 105 SC 105.7 P38 L20 # 352
 Brown, Matt Huawei
 Comment Type ER Comment Status A EZ
 Missing editorial instruction.
 SuggestedRemedy
 Add editorial instruction.
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 See comment #491

Cl 165 SC 165.1.3 P41 L30 # 394
 Akin, Sami VW AG
 Comment Type ER Comment Status A 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."
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 See comments #391 and #448

Cl 165 SC 165.1.3 P41 L31 # 466
 Tu, Mike Broadcom
 Comment Type TR Comment Status A 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 ..."
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 See comments #391 and #448

Cl 165 SC 165.1.3.1 P42 L35 # 340
 Gorshe, Steve Microchip Technology
 Comment Type ER Comment Status A
 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)
 Response Response Status W
 ACCEPT IN PRINCIPLE.
 =====
 replace "(936,846,2^10)" with "(936,846) over GF(2^10)"

Approved Responses

IEEE P802.3cy D2.0 10G+ Auto Task Force Initial Working Group ballot comments

Cl 165 SC 165.3.2 P58 L11 # 467

Tu, Mike Broadcom
 Comment Type TR Comment Status A 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.

Response Response Status W
 ACCEPT.

Cl 165 SC 165.3.2.2 P56 L41 # 341

Gorshe, Steve Microchip Technology
 Comment Type ER Comment Status R

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".

Response Response Status W
 REJECT.

The proposed text is inconsistent with the terminology alignment per comment #710. No changes needed.

Cl 165 SC 165.3.5 P71 L44 # 469

Tu, Mike Broadcom
 Comment Type TR Comment Status A 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."

Response Response Status W
 ACCEPT IN PRINCIPLE.

See comment #710

Cl 165 SC 165.7.1.3.2 P120 L6 # 392

Marris, Arthur Cadence Design Systems
 Comment Type ER Comment Status A EZ, Table 165-15
 XXX

SuggestedRemedy

Change name of "Table 165-15-XXX" to something more meaningful

Response Response Status W
 ACCEPT IN PRINCIPLE.

See comment #439

Cl 165 SC 165.11.4.2.8 P137 L6 # 468

Tu, Mike Broadcom
 Comment Type TR Comment Status A 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".

Response Response Status W
 ACCEPT.