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 they 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.

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.

SuggestedRemedy
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

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

SuggestedRemedy
Delete Table 45–3

Response Response Status W
ACCEPT.
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.

Suggested Remedy
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 PHY's.

-----

Comment Type ER  Comment Status A
P802.3cz (Amendment 7) currently specifies removal of the list in this paragraph.

Suggested Remedy
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

-----

Comment Type ER  Comment Status A
Instruction is not consistent with proper form.

Suggested Remedy
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<<

-----

Comment Type ER  Comment Status A
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.

Suggested Remedy
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

---

Comment 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

---

**Comment 362**

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

**Grow, Robert**  RMG Consulting

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.

---

**Comment 363**

**Cl 105 SC 105.1.2**  P 35  L 37  # 363

**Grow, Robert**  RMG Consulting

Comment Type: TR  Comment Status: A  EZ, 25GBASE-T1 PCS

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

SuggestedRemedy

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

Response

Response Status: W

ACCEPT IN PRINCIPLE.

---

**Comment 364**

**Cl 105 SC 105.1.2**  P 35  L 37  # 364

**Grow, Robert**  RMG Consulting

Comment Type: TR  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 IN PRINCIPLE.

---

**Comment 365**

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

**Grow, Robert**  RMG Consulting

Comment Type: TR  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 IN PRINCIPLE.
**Approved Responses**

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

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<thead>
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<td>12</td>
<td>366</td>
<td>ER</td>
<td>A</td>
<td>Missing editorial instruction. Insert new row into Table 105-1 for 25GBASE-T1 after 25GBASE-T: EZ, Table 105-1</td>
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<td>6</td>
<td>368</td>
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<td>A</td>
<td>As amendment 9, the table from P802.3cz should be used as base. EZ, Table 105-2</td>
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<td>11</td>
<td>451</td>
<td>TR</td>
<td>A</td>
<td>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. EZ, Table 105-2</td>
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<td>11</td>
<td>462</td>
<td>TR</td>
<td>A</td>
<td>Table 105-2 entry &quot;25GBASE-T1&quot; has a column for Clause 165 denoted as &quot;25GBASE-T1 PMD&quot;. 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 &quot;RS-FE PCS and 1-pair PMA&quot; which is inconsistent with the existing text in 3cy D2.0 Table 105-2. EZ, Table 105-2</td>
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**Response**

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**Suggested Remedy**

- Insert new row into Table 105-1 for 25GBASE-T1 after 25GBASE-T:
- As amendment 9, the table from P802.3cz should be used as base.
- Include clause 166 column from P802.3cz/D2.2.
- Change title of 165 column to "25GBASE-T1 PCS/PMA".
Cl 105 SC 105.2 P 37 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 Cl 165.1.2 (p40, line 37)
SuggestedRemedy: Mark the appropriate box for 25GMII with "O" for Optional
Response: Response Status: W
ACCEPT.

Cl 105 SC 105.3 P 37 L 26 # 549
Brown, Matt Huawei
Comment Type: ER Comment Status: A
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.

Cl 105 SC 105.2 P 37 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.

Cl 105 SC 105.3 P 37 L 40 # 450
Brown, Matt Huawei
Comment Type: ER Comment Status: A
When using "insert" instruction, no underline required.
SuggestedRemedy: Remove underline.
Response: Response Status: W
ACCEPT.

Cl 105 SC 105.5 P 37 L 46 # 454
D’Ambrosia, John Futurewei, US Subsidiary of Huawei
Comment Type: ER Comment Status: A
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.

Cl 105 SC 105.5 P 37 L 46 # 451
Brown, Matt Huawei
Comment Type: ER Comment Status: A
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.
Cl 105  SC 105.5  P 37  L 49  # 370
Grow, Robert  RMG Consulting

Comment Type  ER  Comment Status  A
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.

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

Response  Response Status  W  ACCEPT.

Cl 105  SC 105.7  P 38  L 20  # 352
Brown, Matt  Huawei

Comment Type  ER  Comment Status  A
Missing editorial instruction.

Suggested Remedy
Add editorial instruction.

Response  Response Status  W  ACCEPT IN PRINCIPLE.

See comment #491

Cl 165  SC 165.1.3  P 41  L 31  # 406
Tu, Mike  Broadcom

Comment Type  TR  Comment Status  A  multi-pair, EZ
25GBASE-T1 operates over one cable only.

Suggested Remedy
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  P 42  L 35  # 540
Akin, Sami  Microchip Technology

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.

Suggested Remedy
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
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.
5. Page 70, line 2.
6. Page 70, line 3.
10. Page 80, line 11.
11. Page 132, line 43.

Response
ACCEPT.

---

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
REJECT.

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

---

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
ACCEPT IN PRINCIPLE.

---

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

Response
ACCEPT IN PRINCIPLE.

---

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
ACCEPT.

---

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