

IEEE P802.3cw D1.5 400 Gb/s over DWDM systems 6th Task Force review comments

CI **FM** SC **FM** P L # 2

Grow, Robert RMG Consulting

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

To someone not active on the project, content of Clauses 155 and 156 look like they may be based on other clauses.

SuggestedRemedy

Editor's might want to look at changes made during the revision to clauses on which Clauses 155 and 156 are based to look for other style changes. Examples I searched on and commented include capitalization of register, elimination of must, misuse of "PHY", but I am less sure of how correcting misuse of "comprise" and "comprising" and "implementer" were handled in P802.3.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Ensure correct usage of words "comprise", "comprising" and "implementer" based on usage in P802.3 D3.2. See responses to comment 7.

With editorial license.

CI **FM** SC **FM** P L # 1

Grow, Robert RMG Consulting

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

With P802.3/D3.2 at RevCom, it is appropriate to update the cw draft for consistency with IEEE Std 802.3-202x. The draft is currently inconsistent, in some places recognizing that it will not be an amendment to the 2018 revision, and in many places assuming it will be an amendment to the 2018 revision.

SuggestedRemedy

Multiple comments have been submitted but time does not allow this commenter to review all at this time. Editors should update draft for consistency with P802.3/D3.2 as the base document and include the current six amendments assigned numbers (as recognized in front matter), and any other amendments expected to be approved prior to this project.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Review the entire draft and ensure all references are to IEEE Std 802.3-202x, not IEEE Std 802.3-2018.

With editorial license.

CI **FM** SC **FM** P1 L27 # 3

Grow, Robert RMG Consulting

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

Misuse of acronym PHY (see P802.3/D3.2, 1.5.

SuggestedRemedy

Delete "(PHY)"

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "adds Physical Layer (PHY) specifications" to "adds Physical Layer specifications"

CI **FM** SC **FM** P2 L1 # 4

Grow, Robert RMG Consulting

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

This will be an amendment to IEEE Std 802.3-202x as stated on the cover page.

SuggestedRemedy

Replace "2018" with "200x"

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 1

CI **FM** SC **FM** P2 L5 # 5

Grow, Robert RMG Consulting

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

Capitalization of forward error correction in P802.3 was made consistent, this capitalization is not consistent with that used in P802.3/D3.2.

SuggestedRemedy

"forward error correction"

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "Forward Error Correction (FEC)" to "forward error correction (FEC)"

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CI FM SC FM P2 L51 # 10
 Grow, Robert RMG Consulting
 Comment Type ER Comment Status D bucket
 Some information in this copyright block has been updated.
 SuggestedRemedy
 Replace the IEEE-SA front matter with that found in a current template.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Modify copyright block to match copyright block in Version 5.0 of the IEEE 802.3 Working Group FrameMaker template

CI FM SC FM P3 L7 # 8
 Grow, Robert RMG Consulting
 Comment Type E Comment Status D bucket
 IEEE page numbering style has changes no more Roman numeral front matter numbering.
 SuggestedRemedy
 Delete the second paragraph of the note.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI FM SC FM P3 L21 # 9
 Grow, Robert RMG Consulting
 Comment Type ER Comment Status D bucket
 This isn't the current IEEE SA mandated front matter.
 SuggestedRemedy
 Replace the IEEE-SA front matter with that found in a current template.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Modify front matter to match front matter in Version 5.0 of the IEEE 802.3 Working Group FrameMaker template

CI FM SC FM P9 L15 # 11
 Grow, Robert RMG Consulting
 Comment Type ER Comment Status D bucket
 This is not the current FM Introduction (e.g., first paragraph and Section Nine have been modified at a minimum).
 SuggestedRemedy
 Get current Introduction from P802.3/D3.2.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Modify introduction as required to match Version 5.0 of the IEEE 802.3 Working Group FrameMaker template

CI FM SC FM P10 L45 # 12
 Grow, Robert RMG Consulting
 Comment Type E Comment Status D bucket
 Typo.
 SuggestedRemedy
 Replace "04" with "104".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI FM SC FM P11 L27 # 13
 Grow, Robert RMG Consulting
 Comment Type E Comment Status D bucket
 Not the current P802.3/D3.0 self description.
 SuggestedRemedy
 Update with the current P802.3de self description (D3.0 or later as appropriate.)
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Modify IEEE Std 802.3de-202x description to match description in IEEE P802.3de/D3.0

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Cl FM SC FM P11 L33 # 14
 Grow, Robert RMG Consulting
Comment Type ER Comment Status D bucket
 Will cw really be Amendment 7? There are three projects targeting June 2023 RevCom ahead of cw. While I have no issue with writing your amendment as if it will be #7 for now, I would not put a number here just now.
SuggestedRemedy
 Amendment x, Amendment ?, or similar.
Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Change "Amendment 7" to "Amendment x"

Cl 1 SC 1.4 P21 L6 # 15
 Grow, Robert RMG Consulting
Comment Type ER Comment Status D
 Update insert point.
SuggestedRemedy
 "Insert the following two new definitions after 1.4.144a "400GBASE-VR4" (as inserted by IEEE Std 802.3db-202x):"
Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Modify to read "Insert the following two new definitions after 1.4.144a "400GBASE-VR4" (as inserted by IEEE Std 802.3db-202x);" and modify 400GBASE-Z location to 1.4.144b and 400GBASE-ZR location to 1.4.144c.
 With editorial license.

Cl 30 SC 30.5.1.1.2 P12 L22 # 16
 Grow, Robert RMG Consulting
Comment Type ER Comment Status D
 Update insert point.
SuggestedRemedy
 ",,after 400GBASE-VR4 (inserted by IEEE Std 802.3db-202x)..."
Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Change insertion point to "after 400GBASE-SR16 as follows:"

Cl 45 SC 45.2 P23 L3 # 6
 Grow, Robert RMG Consulting
Comment Type ER Comment Status D
 Base text error.
SuggestedRemedy
 P802.3/D3.2 has this "MIDO Interface registers"
Proposed Response Response Status W
 PROPOSED REJECT.
 P802.3cw 45.2 is labeled "MDIO Interface Registers" which is consistent with P802.3/D3.2

Cl 78 SC 78.1.4 P29 L8 # 17
 Grow, Robert RMG Consulting
Comment Type ER Comment Status D
 Though I have some experience in 802.3, I do not have the knowledge of PHY type details to provide with confidence where this insert should be. The rules chosen in the resolution of P802.3/D3.0, comment #-i-52 are:
 1. Increasing speed.
 2. Increasing reach (maximum supported distance over the medium).
 3. Decreasing number of lanes
 The following supplemental rules address are included to address special cases 4. PHY "family designations, by convention, are assigned a reach of 0
 5. "Copper" PHYs precede "Fiber" PHYs (all else being equal)
 6. Alphanumeric sort (all else being equal)
SuggestedRemedy
 Using these rules, and consider the 6 400GBASE inserts being done by P802.3db to determine the correct insert point. (I don't think the insert points in P802.3db/D3.0 follow these rules.)
Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

There is no discernable pattern for insertion point based on P802.3/D3.2 and P802.3db/D3.0. Change insertion point from "Insert new rows for 400GBASE-ZR in Table 78-1 (as modified by IEEE Std 802.3cu-20xx and IEEE Std 802.3ct-20xx) with 400GBASE-ZR after 400GBASE-LR4-6 as follows (unchanged rows not shown):" to "Insert new row for 400GBASE-ZR at end of Table 78-1:"

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CI 116 SC 116 P28 L # 19
 Issenhuth, Tom Huawei
 Comment Type E Comment Status D bucket
 Page numbering for clause 116 is incorrect
 SuggestedRemedy
 Correct the page numbering in clause 116 to align with the rest of the document
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 116 SC 116.1.2 P31 L8 # 18
 Grow, Robert RMG Consulting
 Comment Type ER Comment Status D
 P802.3db/D3.0 modifies this list inserting a new item and re-lettering the last item to be "l)".
 SuggestedRemedy
 Change "i} in the editing instruction (also adding a reference to IEEE Std 802.3db-202x) making the new item "j)". Review clause to assure all P802.3db changes are incorporated in instructions and base text that is being modified.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

In 116.1.2 change insertion point to "Insert item k) at end of lettered list in 116.1.2 (as modified by IEEE Std 802.3ck-202x) as follows:". To align with P802.3/D3.2, the 400GBASE optical table is now 116-5. In 116.1.4 change editing instructions to "Change Table 116-5 as follows:". Change Table 116-4 to Table 116-5 and modify as required to align with Table 116-5 from P802.3/D3.2 before adding new columns for 155 and 156. In 116.2.5 keep editing instructions as written as IEEE Std 802.3ck-202x included Clause 167 as inserted by 803.3dB D3.0. Modify paragraph to match current wording in 802.3ck D3.1 and insert Clause 156 at the end of the sentence.

With editorial license.

CI 116 SC 116.1.4 P28 L3 # 20
 Issenhuth, Tom Huawei
 Comment Type E Comment Status D
 Insertion point states as modified by IEEE Std 802.3cu-20xx. This document is an amendment to P802.3/D3.2 which includes all modifications from 802.3cu so this reference is no longer valid.
 SuggestedRemedy
 Remove reference to P802.3cu. Review entire document and remove any references to amendments included in P802.3/D3.2 and update references as required for amendments to P802.3/D3.2.

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 116 SC 116.1.4 P28 L6 # 21
 Issenhuth, Tom Huawei
 Comment Type E Comment Status D
 Table 116-4 was changed to 116-5 in P802.3/D3.2. There may be other instances of Table or subclause numbering changing with P802.3/D3.2.
 SuggestedRemedy
 Change Table 116-4 to Table 116-5. Review the entire document and change Table or subclause numbering to align with P802.3 D3.2.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 155 SC 155.2.5.6 P47 L1 # 7
 Grow, Robert RMG Consulting
 Comment Type ER Comment Status D
 Use of the word "must" is deprecated.
 SuggestedRemedy
 Rewrite to "shall" or other choice of grammar. Also p. 73, l. 43; p. 75, l. 41, 42; p. 85, l. 34; p. 91, l. 35; and p. 94, l. 26.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Replace "must" with "shall" throughout the document.
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CI 155 SC 155.4.2.1 P61 L50 # 32

Lewis, David Lumentum

Comment Type TR Comment Status D

Because the AM field is protected by C-FEC, the error rate in the amp matching should be extremely low. A single match to the full 1920 bit field should be adequate to declare amp_valid.

SuggestedRemedy

Change the last sentence from: "The sequence is considered to be valid if at least TBD bits match the known bits of the pattern described in 155.2.4.4.1." to "The sequence is considered to be valid if all bits match the known bits of the pattern described in 155.2.4.4.1."

Proposed Response Response Status W

PROPOSED ACCEPT.

LATE COMMENT

CI 155 SC 155.5.2.1 P61 L14 # 23

Sluyski, Mike Cisco Systems

Comment Type TR Comment Status D

faw_valid is TBD

SuggestedRemedy

replace TBD with "8 symbols in a single frame"

Validation methodology to be provided

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion

CI 156 SC 156.7.1 P82 L47 # 24

Sluyski, Mike Cisco Systems

Comment Type T Comment Status D

In Table 156-6 Error Vector magnitude (max) is TBD

SuggestedRemedy

Replace TBD with 12

Justification based on maniloff_3Cw_01_220314 and Rahn_3cw-01a_220223. Further detail on EVM will be provided in a supporting presentation.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

LATE COMMENT

For task force discussion.

CI 156 SC 156.8 P85 L28 # 33

Lewis, David Lumentum

Comment Type TR Comment Status D

Because the channel passband min & max characteristics are specified as black link characteristics in Table 156-8, it is not necessary to have a separate table specifying adjacent channel isolation.

SuggestedRemedy

Remove the parameter from Table 156-8 and delete Table 156-9. Remove the test pattern line for adjacent channel isolation from Table 156-11. Remove the parameter definition at 156.9.29.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

LATE COMMENT

For task force discussion.

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CI 156 SC 156.8 P85 L30 # 25
 Sluyski, Mike Cisco Systems
 Comment Type T Comment Status D
 Interferometric crosstalk at TP3 (max)d in Table 156-8
 SuggestedRemedy
 Remove parameter from table. Remove note (d). ADM applications can be considered Out-of-Scope for this specification.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 LATE COMMENT
 For task force discussion.

CI 156 SC 156.9.14 P90 L39 # 27
 Sluyski, Mike Cisco Systems
 Comment Type T Comment Status D
 The I-Q phase error (max) is TBD
 SuggestedRemedy
 Add definition: The I-Q phase error (max) is the largest proportional phase difference of the in-phase component I and quadrature component Q of the signal. Measured relative to LO
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 LATE COMMENT
 Change definition from "The I-Q phase error (max) is TBD" to "The I-Q phase error (max) is the largest proportional phase difference of the in-phase component I and quadrature component Q of the signal. Measured relative to local oscillator."

CI 156 SC 156.9.1 P86 L35 # 22
 Issenhuth, Tom Huawei
 Comment Type E Comment Status D
 In Table 156-10 pattern description is stated as "Scrambled idle encoded by SC-FEC". 400GBASE-ZR uses CFEC not SC-FEC
 SuggestedRemedy
 Change pattern description to read "Scrambled idle encoded by CFEC"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 156 SC 156.9.15 P90 L43 # 28
 Sluyski, Mike Cisco Systems
 Comment Type T Comment Status D
 The I-Q phase error (min) is TBD
 SuggestedRemedy
 Add definition: The I-Q phase error (min) is the largest negative proportional phase difference of the in-phase component I and quadrature component Q of the signal. Measured relative to LO
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 LATE COMMENT

CI 156 SC 156.9.13 P90 L35 # 26
 Sluyski, Mike Cisco Systems
 Comment Type T Comment Status D
 The I-Q amplitude imbalance (mean) is TBD
 SuggestedRemedy
 Add definition: The I-Q amplitude imbalance (mean) is the center value between the proportional amplitude difference of the in-phase component I and quadrature component Q of the signal.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 LATE COMMENT
 Change definition from "The I-Q amplitude imbalance (mean) is TBD" to "The I-Q amplitude imbalance (mean) is the center value between the proportional amplitude difference of the in-phase component I and quadrature component Q of the signal."

Change definition from "The I-Q phase error (min) is TBD" to "The I-Q phase error (min) is the largest negative proportional phase difference of the in-phase component I and quadrature component Q of the signal. Measured relative to local oscillator."

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CI 156 SC 156.9.16 P90 L46 # 29

Sluyski, Mike Cisco Systems

Comment Type T Comment Status D

The I-Q quadrature skew (max) is TBD

SuggestedRemedy

Add definition: The I-Q quadrature skew (max) is the maximum relative skew between the in-phase component I and quadrature component Q of the signal.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

LATE COMMENT

Change definition from "The I-Q quadrature skew is TBD" to "The I-Q quadrature skew (max) is the maximum relative skew between the in-phase component I and quadrature component Q of the signal."

CI 156 SC 156.10.1.2.4 P94 L45 # 30

Sluyski, Mike Cisco Systems

Comment Type T Comment Status D

Receive filtering definitions include TBDS

SuggestedRemedy

Update as: "The signal is filtered using a 3rd-order super gaussian filter with RRC = 0.2

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

LATE COMMENT

Change definition from "The signal is filtered using a TBD filter with TBD roll-off." to "The signal is filtered using a 3rd-order super gaussian filter with RRC = 0.2."

CI 156 SC 156.10.1.2.6 P95 L3 # 31

Sluyski, Mike Cisco Systems

Comment Type T Comment Status D

FIR filter is defined with TBD TBD taps

SuggestedRemedy

Suggest to use Equalizer definition used in OMA to determine EVM of Rahn_3cw-01a_220223

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

LATE COMMENT

Change "The signal is equalized using an FIR filter with TBD TBD taps" to "The signal is equalized using an FIR filter with 7 real taps"