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<td>156</td>
<td>156.1</td>
<td>63</td>
<td>12</td>
<td>1</td>
<td>E</td>
<td>A</td>
<td>PHY shows 400GBASE-R PCS instead of 400GBASE-ZR PCS</td>
<td>Replace 400GBASE-E with 400GBASE-ZR</td>
<td>ACCEPT IN PRINCIPLE.</td>
<td>Loc. is Page 64 not 63. Replace &quot;400GBASE-R PCS&quot; with &quot;400GBASE-ZR PCS&quot;.</td>
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<td>156</td>
<td>156.1.1</td>
<td>64</td>
<td>39</td>
<td>2</td>
<td>T</td>
<td>A</td>
<td>Comment on FLR references being processed by Clause 119 PCS, but should actually only reference the clause 155 PCS.</td>
<td>Change &quot;additional processed by the FEC (Clause 155) and PCS (Clause 119).&quot; to &quot;processed by the Clause 155 400GBASE-ZR PCS.&quot;</td>
<td>ACCEPT IN PRINCIPLE.</td>
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<td>156</td>
<td>156.7.2</td>
<td>73</td>
<td>21</td>
<td>3</td>
<td>TR</td>
<td>D</td>
<td>Receiver Sensitivity for an unamplified link should not be part of the same PMD as receiver sensitivity for an amplified link. This is a distinct application, and a receiver should not be burdened with a requirement to support both applications. Although the sensitivity spec in Table 156-7 is informative, other aspects of this application are normative. If this is a required application it should be defined as a separate PMD.</td>
<td>Remove sensitivity spec from Table 156-7, or modify to define a separate PMD supporting this.</td>
<td>PROPOSED REJECT. Insufficient justification provided to remove the specification or define a new PMD</td>
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<td>156</td>
<td>156.8</td>
<td>74</td>
<td>27</td>
<td>4</td>
<td>T</td>
<td>D</td>
<td>Optical path power penalty for OSNR at TP3 ≥ 34dB is a separate application, and should be removed or applied to a separate PMD.</td>
<td>Remove power penalty from Table 156-8, or modify to indicate that this is applied to a separate PMD.</td>
<td>PROPOSED REJECT. Insufficient justification provided to remove the specification or define a new PMD</td>
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<td>1</td>
<td>1.4</td>
<td>19</td>
<td>6</td>
<td>5</td>
<td>E</td>
<td>D</td>
<td>Multiple definitions are being added, so the editing instruction should use plural forms.</td>
<td>Change &quot;definition&quot; to &quot;definitions&quot;</td>
<td>PROPOSED ACCEPT IN PRINCIPLE.</td>
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**Comment ID 5**
Multiple definitions are being added, so the editing instruction should use plural forms.

**Suggested Remedy**

Change "abbreviation" to "abbreviations"

**Proposed Response**

PROPOSED ACCEPT.

---

The phrase 'GMP mapped' is often used colloquially, but it would be more clear in the text to say 'mapped using GMP'.

**Suggested Remedy**

Change "The transcoded blocks are then GMP mapped into a 400GBASE-ZR Frame" to "The transcoded blocks are then mapped into a 400GBASE-ZR frame using GMP"

**Proposed Response**

PROPOSED ACCEPT.

---

FEC is being used as both a noun and an adjective in the sentence describing CFEC. While the usage throughout 802.3 is not entirely consistent, within a single sentence we probably should be consistent.

**Suggested Remedy**

Replace "The transmit data is encoded with a concatenated forward error correction (CFEC) consisting of an inner SC-FEC code and an outer Hamming code SD-FEC." to "The transmit data is encoded with a concatenated forward error correction (CFEC) code consisting of an inner SC-FEC code and an outer Hamming SD-FEC code."

**Proposed Response**

PROPOSED ACCEPT.
IEEE P802.3cw D1.1 400 Gb/s over DWDM systems 2nd Task Force review comments

---

**Comment ID** 155  **SC** 155.2.3  **P** 38  **L** 4  **#** 12
Huber, Tom  Nokia

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

It would be more clear to say "mapped into a 400GBASE-ZR frame using GMP" than "GMP mapped"

**Suggested Remedy**

Change:
The 64B/66B codestream is then transcoded into a 256B/257B stream, GMP mapped and FEC bits added in this PCS before transmission to
The 64B/66B codestream is then transcoded into a 256B/257B stream, mapped to a 400GBASE-ZR frame using GMP, and FEC bits are added in this PCS before transmission.

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

---

**Comment ID** 155  **SC** 155.2.4.3  **P** 39  **L** 4  **#** 13
Huber, Tom  Nokia

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

It would be more clear to say "mapped into a 400GBASE-ZR frame using GMP" than "GMP mapped", the word 'payload' is missing from the description of the area of the frame into which the 257b blocks are mapped, and the multiplication symbol should be used rather than x to indicate multiplication.

**Suggested Remedy**

Change item 5 from:
The 400GBASE-ZR PCS payload is GMP mapped into the area of the 400GBASE-ZR frame, starting at column 5141 of row 0 and ending at column 10 280 of row 255. The payload size is 10 220 x 257B.

To

The 400GBASE-ZR PCS payload is mapped into the payload area of the 400GBASE-ZR frame, starting at column 5141 of row 0 and ending at column 10 280 of row 255, using GMP. The payload size is 10 220 × 257B.

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

---

**Comment ID** 155  **SC** 155.2.4.4.1  **P** 40  **L** 6  **#** 14
Huber, Tom  Nokia

**Comment Type** T  **Comment Status** A  **AM alignment**

The AMs are used to locate the row that is the start of the frame, not the row number. There is also a stray comma before the parenthetical phrase.

**Suggested Remedy**

Change:
AM alignment is processed post-FEC decode, after descrambling, to locate the row number corresponding to the start of the 400GBASE-ZR frame, (SC-FEC being already 10 970 bit row aligned).

To

AM alignment is processed post-EC decode, after descrambling, to locate the row corresponding to the start of the 400GBASE ZR frame (SC-FEC being already 10 970 bit row aligned).

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

---

**Comment ID** 155  **SC** 155.2.4.4.3  **P** 40  **L** 21  **#** 15
Huber, Tom  Nokia

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

The reference to G.709.1 at the end of the paragraph should be preceded by ITU-T

**Suggested Remedy**

Insert "ITU-T" before "G.709.1".

**Proposed Response**  **Response Status** W
PROPOSED ACCEPT.
### IEEE P802.3cw D1.1 400 Gb/s over DWDM systems 2nd Task Force review comments

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<td>155</td>
<td>155.2.4.5</td>
<td>P41</td>
<td>L26</td>
<td>16</td>
<td>Huber, Tom</td>
<td>Nokia</td>
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<td><strong>T</strong></td>
<td><strong>Comment Status</strong></td>
<td><strong>CRC reference</strong></td>
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<tr>
<td>The generator polynomial G(x) is not defined anywhere in the text, which makes the detailed description of how to compute the CRC that was copied from the referenced OIF document not useful.</td>
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<tr>
<td><strong>Suggested Remedy</strong></td>
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<td>The computation is fully specified in the referenced OIF document. Delete the second sentence of the second paragraph and the entire third paragraph and bullet list, so the text reads: A 32-bit cyclic redundancy code is calculated over 244,664 input bits as described in the OIF-400ZR-01.0, March 10, 2020, subclause 9.2. The 32 bits of the CRC value are.....</td>
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<td><strong>Response</strong></td>
<td><strong>Response Status</strong></td>
<td><strong>ACCEPT.</strong></td>
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<td></td>
<td></td>
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</tbody>
</table>

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| 17         | 155 | 155.2.4.5 | P41 | L31 | 17 | Huber, Tom | Nokia |
| **Comment Type** | **E** | **Comment Status** | **MBAS description** |
| Missing a ‘d’ in ‘placed’ in the description of where the CRC goes. |
| **Suggested Remedy** |
| Change "The 32 bits of the CRC value are placed with..." to "The 32 bits of the CRC value are placed with." |
| **Proposed Response** | **Response Status** | W |
| **Proposed ACCEPT.** |

---

| 18         | 155 | 155.2.4.5 | P41 | L40 | 18 | Huber, Tom | Nokia |
| **Comment Type** | **E** | **Comment Status** | **MBAS description** |
| The last two paragraphs would be better combined, with the clause in the first sentence of the final paragraph concerning the location of the MBAS field removed (that information is already provied in the first sentence of the next-to-last paragraph). |
| **Suggested Remedy** |
| Replace the last two paragraphs with: Following the CRC-32 a 6-bit MBAS is added. The MBAS is used by the SC-FEC encoder and decoder to synchronize the state of the error de-correlator controllers between the receiver and the transmitter. The staircase FEC implementation uses a 7-bit MBAS which provides a 128-block sequence. The six most significant bits of the 7-bit MBAS are transferred between source and sink in the 6-bit MBAS overhead. The numerical value represented in the six MBAS overhead bits is incremented every two SC-FEC blocks and provides a 128-block multi-block. |
| **Response** | **Response Status** | C |
| **ACCEPT.** |

---

| 19         | 155 | 155.2.4.5 | P41 | L48 | 19 | Huber, Tom | Nokia |
| **Comment Type** | **E** | **Comment Status** | **MBAS description** |
| Multiplication should be indicated with a multiplication symbol rather than an italicized x. |
| **Suggested Remedy** |
| Replace the italicized x’s in the formula with multiplication symbols. |
| **Proposed Response** | **Response Status** | W |
| **PROPOSED ACCEPT.** |

---

| 20         | 155 | 155.2.4.6 | P41 | L1  | 20 | Huber, Tom | Nokia |
| **Comment Type** | **E** | **Comment Status** | **MBAS description** |
| Missing a ‘d’ in ’illustrated’ |
| **Suggested Remedy** |
| Change: ". which are added to the 400GBASE-ZR SC-FEC frame as illustrate in Figure 155-5." to "which are added to the 400GBASE-ZR SC-FEC frame as illustrated in Figure 155-5."
<p>| <strong>Proposed Response</strong> | <strong>Response Status</strong> | W |
| <strong>PROPOSED ACCEPT.</strong> |</p>
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<tr>
<td>21</td>
<td>E</td>
<td>D</td>
<td>E</td>
<td>44</td>
<td>3</td>
<td>Capital B is used as the abbreviation for 'bit' in the rest of the document.</td>
<td>W</td>
<td>PROPOSED ACCEPT.</td>
<td></td>
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<tr>
<td>22</td>
<td>E</td>
<td>D</td>
<td>E</td>
<td>44</td>
<td>3</td>
<td>Multiplication should be indicated with a multiplication symbol rather than an x.</td>
<td>W</td>
<td>PROPOSED ACCEPT.</td>
<td></td>
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<td>23</td>
<td>E</td>
<td>D</td>
<td>E</td>
<td>44</td>
<td>15</td>
<td>&quot;5 x SC-FEC blocks&quot; is awkward</td>
<td>W</td>
<td>PROPOSED ACCEPT.</td>
<td></td>
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<tr>
<td>24</td>
<td>E</td>
<td>D</td>
<td>E</td>
<td>44</td>
<td>44</td>
<td>Bits should be spelled out, and no need to describe the size of the padding again here since it is already clearly described in 155.2.4.7</td>
<td>W</td>
<td>PROPOSED ACCEPT.</td>
<td></td>
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<tr>
<td>25</td>
<td>E</td>
<td>D</td>
<td>E</td>
<td>47</td>
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<td>Multiplication should be indicated with a multiplication symbol rather than an x.</td>
<td>W</td>
<td>PROPOSED ACCEPT.</td>
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<td>26</td>
<td>E</td>
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<td>E</td>
<td>48</td>
<td>7</td>
<td>Multiplication should be indicated with a multiplication symbol rather than an x.</td>
<td>W</td>
<td>PROPOSED ACCEPT.</td>
<td></td>
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</table>

Note: The table above summarizes the comments and responses from the IEEE P802.3cw D1.1 400 Gb/s over DWDM systems 2nd Task Force review comments.
IEEE P802.3cw D1.1 400 Gb/s over DWDM systems 2nd Task Force review comments

Cl 155 SC 155.2.5.7 P48 L10 # 27
Huber, Tom Nokia
Comment Type E Comment Status D

The first sentence of the second paragraph is grammatically awkward

SuggestedRemedy
Change "The beginning of each 400GBASE-ZR frame will have the AM and OH fields within the first 20 x 257B, and are repeated every 10 240 x 257B."
to
The beginning of each 400GBASE-ZR frame will have the AM and OH fields within the first 20 x 257B, and these fields are repeated every 10 240 x 257B.

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 155 SC 155.3.2 P50 L41 # 28
Huber, Tom Nokia
Comment Type E Comment Status D

Multiplication should be indicated with a multiplication symbol rather than an x.

SuggestedRemedy
Replace the x's in both formulas in the paragraph with multiplication symbols.

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 156 SC 156.2 P65 L23 # 20
Huber, Tom Nokia
Comment Type T Comment Status R

Since the value of SIGNAL_DETECT is fixed to OK, and therefore not dependent on the amount of light being received, the NOTE needs to be revised.

SuggestedRemedy
Change
NOTE—SIGNAL_DETECT = OK does not guarantee that the rx_symbol parameters are known to be good. It is possible for a poor quality link to provide sufficient light for a SIGNAL_DETECT = OK indication and still not meet the BER defined in 156.1.1.
to
NOTE - SIGNAL_DETECT = OK does not guarantee that the rx_symbol parameters are known to be good or that the BER defined in 156.1.1 will be met.

Response Response Status C
REJECT.

Wording is identical to the wording in recently published 802.3ct.
IEEE P802.3cw D1.1 400 Gb/s over DWDM systems 2nd Task Force review comments

**Comment ID 32**

**D’Ambrosia, John**
Futurewei, US Subsidiary of Huawei

**Comment Type**: TR  **Comment Status**: A

**Comment**: Stated channel output power range is incorrect
"should be amplified to a channel output range of –16 dBm to 0 dBm."

As noted in Table 156A-1, the range is -12 dBm to 0 dBm

**Suggested Remedy**
modify noted -16 dBm to -12 dBm
also modify -16 dBm to -12 dBm throughout the rest of the subclause as appropriate

**Response**  **Response Status**: C

ACCEPT.

---

**Comment ID 33**

**D’Ambrosia, John**
Futurewei, US Subsidiary of Huawei

**Comment Type**: TR  **Comment Status**: A

**Comment**: Given the potential different stack configurations, this annex should be used to illustrate different examples with the different PCS / PMA

**Suggested Remedy**
Presentation illustrating different concepts will be provided

**Proposed Response**  **Response Status**: W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

**Note**, comment refers to annex 120A.

---

**Comment ID 34**

**D’Ambrosia, John**
Futurewei, US Subsidiary of Huawei

**Comment Type**: TR  **Comment Status**: A

**Comment**: Clause 119 and 120 are not mandatory for 400GBASE-ZR

**Suggested Remedy**
For 400GBASE-ZR - change Clause 119 and 120 from "M" to "O"

**Response**  **Response Status**: C

ACCEPT.

---

**Comment ID 35**

**D’Ambrosia, John**
Futurewei, US Subsidiary of Huawei

**Comment Type**: TR  **Comment Status**: A

**Comment**: 400BASE-R PCS (119) and 400GBASE-R PMA (120) are not noted

**Suggested Remedy**
update table to include clauses 119 and 120 as optional

**Response**  **Response Status**: C

ACCEPT.

---

**Comment ID 36**

**Issenhuth, Tom**
Huawei

**Comment Type**: E  **Comment Status**: A

**Comment**: Clause 155 should not be an external cross references for PCS for 400GBASE-ZR and PMA for 400GBASE-ZR

**Suggested Remedy**
Correct the clause 155 cross references

**Response**  **Response Status**: C

ACCEPT.

---

**Comment ID 37**

**Issenhuth, Tom**
Huawei

**Comment Type**: E  **Comment Status**: A

**Comment**: Figure 156-4 is an imported pdf and appears fuzzy.

**Suggested Remedy**
Update figure in native FrameMaker format to improve quality

**Response**  **Response Status**: C

ACCEPT.
IEEE P802.3cw D1.1 400 Gb/s over DWDM systems 2nd Task Force review comments

Cl 156 SC 156.9.6 P78 L42 #38
Issenhuth, Tom Huawei
Comment Type E Comment Status A
  Figure 156-5 is incomplete.
SuggestedRemedy
  Complete figure 156-5 to be consistent with the figure in the published OIF 400ZR IA 13.1.210
Response Response Status C
  ACCEPT.

Cl 156 SC 156.9.10 P79 L18 #59
Issenhuth, Tom Huawei
Comment Type T Comment Status D
  EVM definition is incomplete.
SuggestedRemedy
  Update EVM definition based on output from EVM ad hoc
Proposed Response Response Status W
  PROPOSED ACCEPT.
  For task force discussion.

Cl 156 SC 156.7.1 P71 L48 #40
Issenhuth, Tom Huawei
Comment Type E Comment Status A
  Sentence does not contain location of definitions.
SuggestedRemedy
  Add location of definitions.
Response Response Status C
  ACCEPT.

Cl 156 SC 156.7.2 P73 L3 #31
Issenhuth, Tom Huawei
Comment Type E Comment Status A
  Sentence does not contain location of definitions.
SuggestedRemedy
  Add location of definitions.
Response Response Status C
  ACCEPT.

Cl 156 SC 156.8 P73 L38 #42
Issenhuth, Tom Huawei
Comment Type E Comment Status A
  Sentence does not contain location of definitions.
SuggestedRemedy
  Add location of definitions.
Response Response Status C
  ACCEPT.