

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl **FM** SC **FM** P1 L39 # 1

Hajduczenia, Marek Charter Communications

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

"Draft D2.0 is prepared for Task Force review"

*SuggestedRemedy*

Likely for initial Working Group review. Next versions should say "working Group ballot recirculation"

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

In line 30 replace "task force" with "working group".

Cl **00** SC **0** P0 L0 # 2

Hajduczenia, Marek Charter Communications

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

Wrong copyright year

*SuggestedRemedy*

2019 is gone, please use 2020

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **139** SC **1.4.60a** P22 L14 # 3

Hajduczenia, Marek Charter Communications

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

is there any specific reason to capitalize "Black Link" and "Channel Spacing"?

*SuggestedRemedy*

All other definitions use lower caps unless it is a proper name. Consider dropping caps  
Same for 1.4.237a/b/d (no need to capitalize Channel/Link/System)  
Same for 1.4.401a - drop case

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "Black Link" to "black link", change "Channel Spacing" to "channel spacing",  
change "Channel" to "channel", change "Link" to "link", "System" to "system" and change  
"Polarization Dependent Loss" to "polarization dependent loss" throughout the document.

Cl **45** SC **45.2.1.133a.1** P27 L28 # 4

Hajduczenia, Marek Charter Communications

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

On reading the definition of this bit, it is absolutely not clear what "Integer value of the Tx optical channel index" really is. Is it frequency in nm, some arbitrary channel number, or something altogether else (frequency in THz?)

*SuggestedRemedy*

Please clarify what specific column from Table 154–6 is mapped into this register  
The same comment applies to register 1.820.5:0 defined in 45.2.1.133e.2

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

In 45.2.1.133a.1 replace the sentences "Bits 1.800.5:0 set the value of the Tx optical channel index (and hence the transmitter optical frequency) with bit 1.800.0 being the LSB and bit 1.800.5 being the MSB. The optical channel that corresponds to this index value is given in the appropriate PMD clause. For 100GBASE-ZR see Table 154–6."

With

"Bits 1.800.5:0 set the value of the Tx optical channel index number (which directly relates to the optical channel and transmitter center frequency) with bit 1.800.0 being the LSB and bit 1.800.5 being the MSB. The channel index number states the optical frequencies that are supported. For 100GBASE-ZR the specific optical frequency supported for each channel index number is listed in Table 154-6."

In 45.2.1.133e.2 replace the sentences "If the PMD is able to operate with an Rx optical channel index that is different from the Tx optical channel index (bit 1.820.15 is one), bits 1.820.5:0 set the value of the Rx optical channel index (which directly relates to the optical channel and receiver center frequency) with bit 1.820.0 being the LSB and bit 1.820.5 being the MSB. The optical channel that corresponds to this index value is given in the appropriate PMD clause."

With "If the PMD is able to operate with an Rx optical channel index number that is different from the Tx optical channel index number (bit 1.820.15 is one), bits 1.820.5:0 set the value of the Rx optical channel index number (and hence the receiver optical frequency) with bit 1.820.0 being the LSB and bit 1.820.5 being the MSB. The channel index number states the optical frequencies that are supported. For 100GBASE-ZR the specific optical frequency supported for each channel index number is listed in Table 154-6."

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 45 SC 45.2.1.186aa P35 L22 # 5 [redacted]  
 Hajduczenia, Marek Charter Communications  
 Comment Type **TR** Comment Status **D**  
 First use of the term IFEC, not defined anywhere really.  
 SuggestedRemedy  
 Provide definition (do not see it in 802.3-2018 right now)  
 Proposed Response Response Status **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 For task force discussion.

Cl 45 SC 45.2.1.186aa P35 L49 # 6 [redacted]  
 Hajduczenia, Marek Charter Communications  
 Comment Type **E** Comment Status **D** bucket  
 Block of text is misaligned / extra spaces at the front  
 SuggestedRemedy  
 Per comment  
 Proposed Response Response Status **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Remove unneeded additional spaces.

Cl 00 SC 0 P1 L29 # 7 [redacted]  
 Lewis, Jon Dell EMC  
 Comment Type **E** Comment Status **D** bucket  
 This is Working Group ballot  
 SuggestedRemedy  
 Change "Task Force review" to "Working Group ballot"  
 Proposed Response Response Status **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See response to comment 1.

Cl 00 SC 0 P1 L27 # 8 [redacted]  
 Lewis, Jon Dell EMC  
 Comment Type **E** Comment Status **D** bucket  
 Missing IEEE Std 802.3cr-202x in the list  
 SuggestedRemedy  
 Add "IEEE std 802.3cr-202x" and align the list with the anticipated order of publication.  
 Proposed Response Response Status **W**  
 PROPOSED ACCEPT.

Cl 00 SC 0 P12 L36 # 9 [redacted]  
 Lewis, Jon Dell EMC  
 Comment Type **E** Comment Status **D** bucket  
 Add IEEE std 802.3cr information  
 SuggestedRemedy  
 Add "IEEE Std 802.3crTM-20xx  
 This amendment includes changes to IEEE Std 802.3-2018 and adds Annex J. This amendment replaces references to the IEC 60950 series of standards (including IEC 60950-1 "Information technology equipment—Safety—Part 1: General requirements") with appropriate references to the IEC 62368 "Audio/video, information and communication technology equipment" series and makes appropriate changes to the standard corresponding to the new references." and align with expected publication order.  
 Proposed Response Response Status **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See response to comment 74. Align with expected publication order.

Cl 80 SC 80.2.4 P50 L5 # 10 [redacted]  
 Laubach, Mark Self  
 Comment Type **E** Comment Status **D** bucket  
 "Clause 83", "Clause 94", "Clause 135" and "Clause 153" should be forest green.  
 SuggestedRemedy  
 Make 'em forest green.  
 Proposed Response Response Status **W**  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 152 SC 152.5.1 P60 L44 # 11

Laubach, Mark Self  
 Comment Type E Comment Status D bucket

Suggest modifying the line beginning with "<ital>inst<ital>" for clarity.

*SuggestedRemedy*

Consider changing the beginning of the sentence to "Where <ital>inst<ital> is ". Then tightening up the spaces and horizontal centering for the line.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The style of the note follows that of other existing figures, e.g., Figure 83-5.

Increase the amount of space between italicized "inst" and "PMA or FEC" to make it more obvious this is a one-entry variable list and not a sentence with a bit of extra space in it.

Cl 154 SC 154.6 P106 L8 # 12

Laubach, Mark Self  
 Comment Type E Comment Status D

The grey shaded box in Figure 154-3 is confusing. Should be removed, less grey, and/or labeled as "black link"?

*SuggestedRemedy*

Editor's choice to amend for clarity.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add a note to clarify the grey box in Figure 154-3, to indicate that this part of the specification is outside the scope of this clause and the details inside the box are only shown as an example to provide some information. With editorial license.

Cl 154 SC 154.6 P107 L32 # 13

Laubach, Mark Self  
 Comment Type E Comment Status D Bucket

Missing cross reference

*SuggestedRemedy*

Both occurrences of "Table 154-6" in this paragraph should be a cross reference.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 154 SC 154.8.21 P113 L18 # 14

Laubach, Mark Self  
 Comment Type E Comment Status D Bucket

Text is mis-formatted as italic.

*SuggestedRemedy*

Change to regular, non-italic text.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 80 SC 80.1.3 P48 L14 # 15

Anslow, Pete Self  
 Comment Type ER Comment Status D

Changes to figures (other than the title) should show the figure as changed, not rely on the roll-up editor to interpret the change. Also, there should only be one "or"

*SuggestedRemedy*

Change the editing instruction to:  
 "Replace Figure 80-1 with the following figure:"  
 bring Figure 80-1 in to the draft and change:  
 "100GBASE-R or 100GBASE-P" to:  
 "100GBASE-R,  
 100GBASE-P,  
 or 100GBASE-Z"  
 with no underline or strikethrough.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 154 SC 154.11.4.3 P118 L6 # 16

Issenhuth, Tom Huawei  
 Comment Type E Comment Status D Bucket

The table is for "PMD to MDI optical specifications for 100GBASE-ZR" but the entries are duplicates of the first 2 lines of the previous table

*SuggestedRemedy*

Modify the table to include the proposed values per D1.2 comment 125.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
 Implement remedy with editorial license.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 154.7.1 P108 L33 # 17  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D Bucket  
 The placement of the "a" footnote marker is incorrect  
 SuggestedRemedy  
 Move the location of the footnote marker to after (193.6).  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Implement proposed remedy.  
 Also move location of (min) for "Fiber dispersion slope (min) (S0)" in Table 154-10 to after "(S0)"

Cl FM SC FM P1 L27 # 18  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D bucket  
 Missing IEEE Std 802.3cr-20xx, IEEE Std 802.3cp-20xx and IEEE Std 802.3cs-20xx  
 SuggestedRemedy  
 Insert .cr and .cp after .ca and insert .cs after .cu  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See response to comment 8.

Cl FM SC FM P12 L37 # 19  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D bucket  
 Missing IEEE Std 802.3cr-20xx, IEEE Std 802.3cp-20xx and IEEE Std 802.3cs-20xx  
 SuggestedRemedy  
 Insert .cr and .cp after .ca and insert .cs after .cu  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See response to comment 9.

Cl FM SC FM P1 L27 # 20  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D bucket  
 802.3ch and 802.3ca have been approved as standards.  
 SuggestedRemedy  
 Change -20xx to -2020 for both.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl FM SC FM P12 L20 # 21  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D bucket  
 802.3ch has now been approved as a standard.  
 SuggestedRemedy  
 Change -20xx to -2020.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl FM SC FM P12 L26 # 22  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D bucket  
 802.3ca has now been approved as a standard.  
 SuggestedRemedy  
 Change -20xx to -2020.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 154 SC 154.10 P114 L43 # 23  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D Bucket  
 IEC 61753-1-1 has been withdrawn and superseded by IEC 61753-1 Edition 2.0 August 1, 2018  
 SuggestedRemedy  
 Change to IEC 61753-1  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 154.11.4.6 P119 L8 # 24  
 Issenhuth, Tom Huawei  
 Comment Type E Comment Status D Bucket  
 IEC 61753-1-1 has been withdrawn and superseded by IEC 61753-1 Edition 2.0 August 1, 2018  
 SuggestedRemedy  
 Change to IEC 61753-1  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 152 SC 152.5.3.5 P66 L7 # 25  
 Slavick, Jeff Broadcom  
 Comment Type ER Comment Status D bucket  
 Missed a conversion from Tx to Rx.  
 SuggestedRemedy  
 Change "rx\_coded\_c, from tx\_xcoded" to "rx\_coded\_c, from rx\_coded"  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 152 SC 152.3.7 P68 L3 # 26  
 Slavick, Jeff Broadcom  
 Comment Type TR Comment Status D  
 In 91.5.2.7 it refers to tx\_scrambled and am\_txmapped, but in this Clause it's rx\_scrambled and am\_rxmapped.  
 SuggestedRemedy  
 Add the following after 91.5.2.7: "with the exception that the message symbols come from rx\_scrambled and rx\_ammapped."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Add a sentence at the end of sub-clause 152.5.3.7  
 Since the encoder is used in the receive direction of transmission, the message symbols come from rx\_scrambled and rx\_ammapped rather than tx\_scrambled and tx\_ammapped.

Cl 152 SC 152.5.2.3 P61 L20 # 27  
 Slavick, Jeff Broadcom  
 Comment Type TR Comment Status D  
 The decoder is identical to clause 91 except for the variable that contains the data. State that clearly.  
 SuggestedRemedy  
 Change "The Reed-Solomon decoder extracts the message symbols from the RS(544,514) codeword, corrects them as necessary, and discards the parity symbols. The message symbols correspond to 20 transcoded blocks tx\_scrambled. See 91.5.3.3."  
 To: "The Reed-Solomon decoder implements the RS(544,510) FEC decoder described in 91.5.3.3 with the exception that message symbols come from tx\_scrambled."

Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change "The Reed-Solomon decoder extracts the message symbols from the RS(544,514) codeword, corrects them as necessary, and discards the parity symbols. The message symbols correspond to 20 transcoded blocks tx\_scrambled. See 91.5.3.3."  
 To: "The Reed-Solomon decoder implements the RS(544,510) FEC decoder described in 91.5.3.3 with the exception that message symbols come from tx\_scrambled rather than rx\_scrambled."

Cl 152 SC 152.5.3.7 P68 L1 # 28  
 Slavick, Jeff Broadcom  
 Comment Type E Comment Status D bucket  
 Capitlization  
 SuggestedRemedy  
 Make the "E" in "Encoder" lowercase for the section title. And the first sentence of the text in the section.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 152 SC 152.5.3.8 P68 L5 # 29  
 Slavick, Jeff Broadcom  
 Comment Type E Comment Status D bucket  
 Capitlization  
 SuggestedRemedy  
 Make the "D" in "Distribution" lowercase for the section title.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 153 SC 153.2.3.2.4 P83 L43 # 30

Slavick, Jeff Broadcom

Comment Type TR Comment Status D

Is the pattern supplied sent Left to right or Right to left or first field (sent R to L) followed by 2nd field (sent R to L)

SuggestedRemedy

Add statement to 1) which defines the order the bits are transmitted.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

While it is normally the convention that when written in binary form that the bits would be transmitted left to right, change:

"The FAS is the following fixed bit pattern:"

to

"The FAS is the following fixed bit pattern, transmitted left to right:"

Cl 153 SC 153.2.3.2.4 P83 L20 # 31

Slavick, Jeff Broadcom

Comment Type TR Comment Status D

No Annex which provides a sample FEC frame is provided like 91A and 119A

SuggestedRemedy

Add an Annex that provides a sample SC-FEC frame

Proposed Response Response Status W

PROPOSED REJECT.

Insufficient remedy proposed. Commenter is invited to submit proposed text for the type of Annex envisioned.

A challenge is that the FEC codewords for RS(528,514) is 5280 bits, and for RS(544,514) are 5440 bits, whereas a FEC codeword for SC-FEC is 261120 bits, so it is less clear that a text sequence of numeric values for a full FEC codeword is meaningful or useful for the reader.

While test vectors are known to exist for this FEC code, none are currently published in a place where they can be referenced.

G.709.2, which is referenced, provides significant detail on the structure of the code, the way the block interleavers work, and the permutation factor tables.

Cl 45 SC 45.2.1.186ab P35 L48 # 32

Nicholl, Shawn Xilinx

Comment Type ER Comment Status D bucket

Extra space at start of line.

SuggestedRemedy

Remove the space that precedes "The assignment of bits ..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 6.

Cl 152 SC 152.5.2.3 P61 L21 # 33

Nicholl, Shawn Xilinx

Comment Type TR Comment Status D bucket

This sub-clause makes reference to 91.5.3.3, without indication of differences from 91.5.3.3.

SuggestedRemedy

91.5.3.3 (as amended by 802.3cd-2018) contains an optional 91.5.3.3.1 FEC Degraded SER. Propose to add a sentence to 152.5.2.3 saying "The optional sub-clause 91.5.3.3.1 is not supported for the Inverse RS-FEC sublayer".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 152 SC 152.5.3.1 P65 L5 # 34

Nicholl, Shawn Xilinx

Comment Type ER Comment Status D bucket

Typo in concatenatiing

SuggestedRemedy

Replace "concatenatiing" with "concatenating"

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

**CI FM**    **SC FM**                    **P12**        **L20**        # **35**  
 Wienckowski, Natalie                    General Motors  
*Comment Type*    **E**            *Comment Status*    **D**                    *bucket*  
 IEEE802.3ch was approved by the Standards Board.  
*SuggestedRemedy*  
 Change: 20xx to 2020  
*Proposed Response*                    *Response Status*    **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
  
 See response to comment 21.

**CI FM**    **SC FM**                    **P12**        **L22**        # **36**  
 Wienckowski, Natalie                    General Motors  
*Comment Type*    **E**            *Comment Status*    **D**                    *bucket*  
 ch is Amendment 8. The description has been slightly modified for publication.  
*SuggestedRemedy*  
 Add "Amendment 8(Em dash)" before the description.  
 Change: Clause 149 and Annex 149A and Annex 149B  
 To: Clause 149, Annex149A, Annex 149B and Annex 149C  
*Proposed Response*                    *Response Status*    **W**  
 PROPOSED ACCEPT.

**CI FM**    **SC FM**                    **P12**        **L26**        # **37**  
 Wienckowski, Natalie                    General Motors  
*Comment Type*    **E**            *Comment Status*    **D**                    *bucket*  
 IEEE802.3ca was approved by the Standards Board.  
*SuggestedRemedy*  
 Change: 20xx to 2020  
*Proposed Response*                    *Response Status*    **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
  
 See response to comment 22.

**CI FM**    **SC FM**                    **P12**        **L28**        # **38**  
 Wienckowski, Natalie                    General Motors  
*Comment Type*    **E**            *Comment Status*    **D**                    *bucket*  
 ca is Amendment 9.  
*SuggestedRemedy*  
 Add "Amendment 9(Em dash)" before the description.  
*Proposed Response*                    *Response Status*    **W**  
 PROPOSED ACCEPT.

**CI 45**    **SC 45.2.1.186ab.8**                    **P37**        **L33**        # **39**  
 Wienckowski, Natalie                    General Motors  
*Comment Type*    **E**            *Comment Status*    **D**                    *bucket*  
 Awkward wording  
*SuggestedRemedy*  
 Change: the decoder has this ability to the bypass error indication function  
 To: the decoder has this ability to bypass the error indication function  
*Proposed Response*                    *Response Status*    **W**  
 PROPOSED ACCEPT.

**CI 80**    **SC 80.1.3**                    **P48**        **L16**        # **40**  
 Wienckowski, Natalie                    General Motors  
*Comment Type*    **E**            *Comment Status*    **D**  
 It seems this is a note for the Editor on what they were supposed to do. When this is "rolled up" the changes aren't shown. I don't know if the intent was to show an updated drawing, or just to provide the changed text that would be in the drawing.  
*SuggestedRemedy*  
 Change: "100GBASE-R, or 100GBASE-P, or 100GBASE-Z." with proper strike-out and underline.  
 To: 100GBASE-R(start underline),(end underline) or 100GBASE-P(start underline), or 100GBASE-Z(end underline)  
*Proposed Response*                    *Response Status*    **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
  
 See response to comment 15.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

CI 80 SC 80.1.4 P48 L20 # 41  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 "Add" is not a proper editing instruction, you need to use "insert". When all the text shown is being inserted, it doesn't need to be underlined.  
 SuggestedRemedy  
 Change editing instruction to: Insert the following text as a new eight paragraph of 80.1.4 as follows:  
 Also, remove underline on text to be inserted.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 80 SC 80.1.4 P48 L27 # 42  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 The (Em dash) after the table number is not part of the table number and should not be included in the reference.  
 SuggestedRemedy  
 Remove the (EM dash) after Table 80-1 in the editing instruction. Look for this throughout the document, e.g. P49L3, etc.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 80 SC 80.1.5 P49 L3 # 43  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 Where is table 80-4a?  
 SuggestedRemedy  
 Insert the following in the editing instruction after Table 80-4a: (as inserted by IEEE Std 802.3cd-2018)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 80 SC 80.5 P54 L1 # 44  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D  
 The editing instruction says to change the table, but I don't see any underline or strikethrough in the table to indicate changes.  
 SuggestedRemedy  
 Delete the editing instruction and table 80-7.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 152 SC 152.5.2.5 P61 L38 # 45  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 "as follows" should always be followed by ":", not "."  
 SuggestedRemedy  
 Change: as follows.  
 To: as follows:  
 Make this change throughout the draft.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Make the indicated change on P61L38, P61L44, P61L50, P62L22

CI 152 SC 152.5.3.6 P67 L35 # 46  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 Incorrect number format.  
 SuggestedRemedy  
 Change: 16384  
 To: 16 384 (with a non-breaking space)  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 153 SC 153.1.2 P80 L35 # 47  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 Why is AN in the list of acronyms for the Figure when AN isn't used in the Figure? If it's in the Figure and I missed it, NEGOTATION should be NEGOTIATION.  
 SuggestedRemedy  
 Delete: AN = AUTO-NEGOTATION  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.2.32.4 P86 L29 # 50  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 missing spaces  
 SuggestedRemedy  
 Change: 512x510  
 To: 512 x 510  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.2.32.4 P84 L16 # 48  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 missing spaces  
 SuggestedRemedy  
 Change: 255/227  
 To: 255 / 227  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.2.3.2.7 P87 L33 # 51  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 missing "be" verb  
 SuggestedRemedy  
 Change: first 16 octets of the FEC frame distributed  
 To: first 16 octets of the FEC frame are distributed  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 For consistency with the rest of the paragraph, change:  
 "first 16 octets of the FEC frame distributed"  
 To:  
 "first 16 octets of the FEC frame is distributed"

Cl 153 SC 153.2.32.4 P86 L3 # 49  
 Wienckowski, Natalie General Motors  
 Comment Type T Comment Status D bucket  
 math error. If this is not a math error, please explain how 3 can be the correct answer.  
 SuggestedRemedy  
 Change:  $75 + 12 - 80 = 3$   
 To:  $75 + 12 - 80 = 7$   
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.2.4.1.1 P89 L15 # 52  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 inconsistent/incorrect use of true/false & True/False throughout this subclause  
 SuggestedRemedy  
 When describing the states of a Boolean variable use "TRUE" and "FALSE".  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 153 SC 153.3.1 P93 L49 # 53  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 missing spaces  
 SuggestedRemedy  
 Change: 255/227  
 To: 255 / 227  
 Also on line P93L51, P94L38, P94L53, P95L24  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.2.3.2.7 P87 L35 # 54  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D bucket  
 wrong "dash" type  
 SuggestedRemedy  
 Change the "En dash" after "NOTE" to an "EM dash"  
 Also P94L44, P95L30  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 154 SC 154.11.4.2 P117 L26 # 55  
 Wienckowski, Natalie General Motors  
 Comment Type E Comment Status D Bucket  
 Wrong support options for a Mandatory item for an optional feature. In this case the choices should be Yes and N/A.  
 SuggestedRemedy  
 Change: No  
 To: N/A  
 Also P118L7  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.2.3.3.1 P87 L47 # 56  
 Trowbridge, Steve Nokia  
 Comment Type TR Comment Status D  
 The frame alignment process encounters false loss of lock too frequently, as described in trowbridge\_01\_200528 presented in the 28 May 2020 interim Task Force Conference call.  
 SuggestedRemedy  
 Implement the remedy described in trowbridge\_01a\_200611 to the 11 June 2020 Interim Task Force call. Note that this remedy includes a change to the Bibliography (Annex A) as well as to clause 153.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 80 SC 80.2.4 P50 L9 # 57  
 Trowbridge, Steve Nokia  
 Comment Type T Comment Status D  
 A clause 135 PMA may be used across the C2M interface (above the Inverse RS-FEC) in a 100GBASE-ZR PHY type  
 SuggestedRemedy  
 Change:  
 "Clause 135 specifies a PMA that may be used in other 100GBASE-P PHY types."  
 to  
 "Clause 135 specifies a PMA that may be used in other 100GBASE-P or 100GBASE-ZR PHY types."  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

Cl 80 SC 80.3.2 P51 L20 # 58  
 Trowbridge, Steve Nokia  
 Comment Type ER Comment Status D  
 The "..." appears in the wrong place - 3 occurrences in Figure 80-4a  
 SuggestedRemedy  
 Move "..." to be between lane 1 and lane 19 in both the Tx and Rx direction in the PMA service interface, and between lane 1 and lane 19 in the Rx direction in the FEC service interface  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

CI 153 SC 153.3.2.3.1 P95 L24 # 59

Trowbridge, Steve

Nokia

Comment Type E Comment Status D

The encoder (clause 153.3.2.2.2) does the math and gives a number (not just a formula) for the top-line baud rate, but the equivalent decoder section does not.

SuggestedRemedy

Add the approximate top-line baud rate (~27.9525 GBd) after the formula.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 154 SC 154.2 P101 L15 # 60

Trowbridge, Steve

Nokia

Comment Type E Comment Status D Bucket

The number cited (27.9525 Gbd) is not an exact nominal value. Same issue in the next paragraph.

SuggestedRemedy

The corresponding PMA clause uses the exact formula and an approximate nominal:  $(255/227) \times 24.8832$  Gbd (~27.9525 Gbd).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
Implement the proposed remedy with editorial license.

CI 1 SC 1.4.237a P22 L25 # 61

Zimmerman, George

CME Consulting/ADI, Cisco, Commscope, Marvell, Se

Comment Type TR Comment Status D

The definitions DWDM Channel, Link, PHY, and System are circular without a definition of DWDM. A definition for DWDM was proposed in the work, ([http://www.ieee802.org/3/B10K/public/18\\_03/dambrosia\\_b10k\\_01\\_0318.pdf](http://www.ieee802.org/3/B10K/public/18_03/dambrosia_b10k_01_0318.pdf)) but never included in the draft, and it is not present in 802.3-2018. While Wavelength Division Multiplexing may be self explanatory, and the expansion obvious, the expansions in the 802 abbreviations don't provide the necessary technical information for a definition, basically, how dense is dense. A definition from the study group, based on G.671, modified to make it clear that optical transmission is meant, is offered.

SuggestedRemedy

Add new definition 1.4.227a Dense Wavelength Division Multiplexing (DWDM). An optical WDM technology where the frequency spacing is less than or equal to 1000 GHz.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

CI FM SC FM P1 L28 # 62

Marris, Arthur

Cadence Design Systems

Comment Type E Comment Status D bucket

802.3ch-2020 and 802.3ca-2020 have been published

SuggestedRemedy

Change "802.3ch-20XX and 802.3ca-20XX" to "802.3ch-2020 and 802.3ca-2020" throughout the document

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See responses to comments 21 and 22.

CI FM SC FM P21 L2 # 63

Marris, Arthur

Cadence Design Systems

Comment Type E Comment Status D

It would be nice if coherent modulation was mentioned in the abstract

SuggestedRemedy

Change second sentence in abstract to: "This amendment adds 100 Gb/s Physical Layer specifications and management parameters for operation over DWDM systems using coherent modulation with reaches of at least 80 km."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. Related to comments 81 and 139.

CI 45 SC 45.2.1.186ab P36 L21 # 64

Marris, Arthur

Cadence Design Systems

Comment Type E Comment Status D bucket

1.2201.7:3 are reserved

SuggestedRemedy

Change "1.2201.6:3" to "1.2201.7:3" in Table 45-150ab

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 45 SC 45.2.1.186ah P39 L44 # 65

Marris, Arthur Cadence Design Systems

Comment Type E Comment Status D bucket

This is the first use the term SC-FEC so it would be good to explain the abbreviation

*SuggestedRemedy*

Change text to: "The assignment of bits in the SC-FEC (staircase FEC) alignment status 1 register is shown in Table 45–150ag."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change text to: "The assignment of bits in the staircase FEC (SC-FEC) alignment status 1 register is shown in Table 45–150ag."

Cl 80 SC 80.1.5 P49 L24 # 66

Marris, Arthur Cadence Design Systems

Comment Type T Comment Status D

Is Clause 91 really an option?

*SuggestedRemedy*

Delete "O" from the 91 column or delete the column completely in Table 80-4b. Also consider deleting 91 row from Table 154-1

Proposed Response Response Status W

PROPOSED REJECT.

Clause 91 RS(544) FEC may optionally be used on the host side of the Chip-to-Module interface, paired with a Clause 152 Inverse RS FEC on the module side before the SC-FEC sublayer. The table is correct.

Cl 152 SC 152.6 P72 L15 # 67

Marris, Arthur Cadence Design Systems

Comment Type TR Comment Status D

Insert IFEC enable functionality that is currently specified in IEEE Draft P802.3ck/D1.2

*SuggestedRemedy*

Incorporate the 802.3ck modifications to 152.6 and 45.2.1.186aa in 802.3ct. Also make it so IFEC is enabled by setting the variable to one (not zero) "When the IFEC\_Enable variable is set to one, the Inverse RS-FEC sublayer performs the transmit function as specified in 152.5.2 and the receive function as specified in 152.5.3. When the variable is set to a zero, the transmit and receive functions are disabled, and the Inverse RS-FEC sublayer is bypassed,"

Proposed Response Response Status W

PROPOSED REJECT.

P802.3ct is ahead of P802.3ck in the process, and will likely be approved first. In the context of P802.3ck, clause 152 IFEC would always be back-to-back with clause 161 interleaved FEC, and both sublayers would be enabled or disable as a pair. In the context of P802.3ct, there is no case where the Inverse RS-FEC sublayer can ever be (or ever needs to be) disabled, and in fact this would make no sense as this would feed the RS(544) format directly to the clause 153 SC-FEC sublayer. P802.3ck can add this configurability to the mechanism produced by P802.3ct when needed.

Cl 154 SC 154.7 P107 L # 68

Stassar, Peter Huawei

Comment Type ER Comment Status D

Several of the parameter namings are not consistent with previously used conventions and should therefore be modified. This has already been discussed during the TF interim teleconference meeting on 11 June 2020 as shown in [http://www.ieee802.org/3/cw/public/tf\\_interim/20\\_0611/stassar\\_3cw\\_01\\_200611.pdf](http://www.ieee802.org/3/cw/public/tf_interim/20_0611/stassar_3cw_01_200611.pdf). In this context it is strongly desirable to use consistent naming between 100GBASE-ZR and 400GBASE-ZR draft specifications

*SuggestedRemedy*

Implement the changes as proposed in [http://www.ieee802.org/3/cw/public/tf\\_interim/20\\_0611/stassar\\_3cw\\_01\\_200611.pdf](http://www.ieee802.org/3/cw/public/tf_interim/20_0611/stassar_3cw_01_200611.pdf), except "Average receive power [amplified] (max)" which should be "Average receive power [amplified] (min)"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
For TF discussion and agreement.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

CI 154 SC 154.5.4 P104 L32 # 69

Stassar, Peter Huawei

Comment Type T Comment Status D

The signal\_detect level of -30 dBm at TP3 is too low in the presence of optical noise (ASE) due to the presence of one (or more) optical amplifier(s) inside the black link. In order to get a sufficiently reliable signal\_detect level in the case of amplified operation, this threshold should be increased to -23 dBm, which is still sufficiently below the Minimum average input power [amplified] of -16 dBm specified for the amplified operation. On the other hand for unamplified operation, being a side application supported by this specification, a signal\_detect level of -30 dBm is right on the level of Minimum average input power [unamplified] of -30 dBm and therefore too high for the unamplified operation. Defining a single signal\_detect level appropriate for both amplified and unamplified operation is therefore not possible. Because the amplified operation is the "normative" application consistent with the agreed objective of 80 km, this specification needs to focus on that application. A suitable signal\_detect in an unamplified application should be addressed in a note.

SuggestedRemedy

In Table 154-5 modify the signal\_detect level of -30 dBm to -23 dBm and address unamplified operation in a Note, with content TBD, pending further discussion

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
For Task Force discussion.

CI FM SC FM P1 L28 # 70

Grow, Bob RMG Consulting

Comment Type T Comment Status D bucket

Including IEEE Std 802.3cu-20xx in the list (which is in WG recirculation 2) makes sense (and is justified by inclusion of base text from cu, but I believe with P802.3cr (which is in SA ballot) the list should also include IEEE Std 802.3cr-20xx. as P802.3cu/D2.2, 151.9.1 includes a reference to J2, and therefore needs to follow P802.3cr as currently written.

SuggestedRemedy

Add IEEE Std 802.3cr-20xx to the list as the 10th amendment (before IEEE Std 802.3cu-20xx).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 9.

CI FM SC FM P2 L5 # 71

Grow, Bob RMG Consulting

Comment Type E Comment Status D bucket

This instance of "Energy Efficient Ethernet" isn't hyphenated.

SuggestedRemedy

Energy-Efficient Ethernet

Proposed Response Response Status W

PROPOSED ACCEPT.

CI FM SC FM P12 L22 # 72

Grow, Bob RMG Consulting

Comment Type E Comment Status D bucket

This amendment has a number.

SuggestedRemedy

Insert "Amendment 8 --".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 36.

CI FM SC FM P12 L28 # 73

Grow, Bob RMG Consulting

Comment Type E Comment Status D bucket

This amendment has a number.

SuggestedRemedy

Insert "Amendment 9 --".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 38.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl **FM** SC **FM** P**12** L**37** # **74**

Grow, Bob RMG Consulting

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

Because this draft references Annex J2 (154.9.1), IEEE Std 802.3cr needs to precede this project in amendment number because it adds the Annex.

*SuggestedRemedy*

Add: IEEE Std 802.3crTM-20xx IEEE Std 802.3crTM-20xx

Amendment 10 -- This amendment includes changes to IEEE Std 802.3-2018 and adds Annex J. This amendment replaces references to the IEC 60950 series of standards (including IEC 60950-1 "Information technology equipment—Safety—Part 1: General requirements") with appropriate references to the IEC 62368 "Audio/video, information and communication technology equipment" series and makes appropriate changes to the standard corresponding to the new references This amendment includes changes to IEEE Std 802.3-2018 and adds Annex J. This amendment replaces references to the IEC 60950 series of standards (including IEC 60950-1 "Information technology equipment—Safety—Part 1: General requirements") with appropriate references to the IEC 62368 "Audio/video, information and communication technology equipment" series and makes appropriate changes to the standard corresponding to the new references.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **1** SC **1.4** P**22** L**37** # **75**

Grow, Bob RMG Consulting

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

802.3bt deleted 294 and instructed renumbering. Previous amendments have used the renumbered subclause for items after 294.

*SuggestedRemedy*

The instruction should reference 400, and the insertion should be numbered 400a similar to previous amendments.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

Modify instruction to read "Insert the following new definition after 1.4.400 "Point-to-point emulation (P2PE)" (re-numbered from 1.4.401 due to the deletion of 1.4.294 by IEEE Std 802.3bt-2018)". Modify the insertion to 1.4.400a.

Cl **80** SC **80.1.3** P**48** L**16** # **76**

Grow, Bob RMG Consulting

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

The text inappropriately includes editing instruction.

*SuggestedRemedy*

In Figure 80-1, replace the list of medium types ("100GBASE-R or 100GBASE-P") under CGMII with "100GBASE-R or 100GBASE-P or 100GBASE-Z". Delete line 16. Or alternately, provide a replacement table with an editing instruction to replace Table 80-1.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 15.

Cl **80** SC **80.2.2** P**49** L**33** # **77**

Grow, Bob RMG Consulting

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

The base text and change marking is incorrect.

*SuggestedRemedy*

There should be a strikethrough "and" before 100GBASE-P" and ", and 100GBASE-Z" should be underscore.

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl **154** SC **154.9.1** P**113** L**25** # **78**

Grow, Bob RMG Consulting

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

This text differs from P802.3cr, 150.9.1.

*SuggestedRemedy*

Replace sentence with; "All equipment subject to this clause shall conform to J.2."

Proposed Response Response Status **W**

PROPOSED REJECT.

Changing the relevant sentence does not improve the quality of the draft. The current sentence is also used in P802.3cu D2.2

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 154.5.4 P104 L32 # 79

Schmitt, Matt CableLabs

Comment Type T Comment Status D

Table 154-5 sets a requirement that if the Average optical power at TP3 is less than or equal to -30 dBm, the SIGNAL\_DETECT value must be set to FAIL. Since that is the same as the required lower threshold for receiver sensitivity, there is no margin for any inaccuracies in the receiver power meter. Further, it prohibits a receiver from exceeding the requirement for sensitivity, since all values less than -30 dBm must be marked as FAIL, even if the receiver can decode them successfully. Setting this value lower will provide some margin and permit implementations that exceed the minimum requirement.

*SuggestedRemedy*

In the first row of Table 154-5, change "-30 dBm" to "-32 dBm".

Proposed Response Response Status W

PROPOSED REJECT.

The commenter addresses an issue related to unamplified operation of the interface not satisfying the objective of "operation on a single wavelength capable of at least 80 km over a DWDM system".

Lowering the threshold of SIGNAL\_DETECT to -32 dBm will not address the issue of the presence of noise from optical amplifiers inside a black link meeting the requirements from the project objective, an issue which is raised in other comments.

See also resolution to comment #69.

Cl 154 SC 154.5.4 P104 L43 # 80

Schmitt, Matt CableLabs

Comment Type T Comment Status D

As pointed out in deandrea\_3ct\_01\_200611, when an optical amplifier (EDFA) is a part of the black link, the noise floor could be amplified above the power threshold for signal detect. To account for that, while not mandatory, an implementer may wish to consider the presence of a valid 100GBASE-R signal in determining whether or not to set the SIGNAL\_DETECT value to OK. Some additional text to point that out could be helpful for implementers.

*SuggestedRemedy*

At the end of the 3rd paragraph in 154.5.4, add an additional sentence that reads: "In addition, as the presence of optical amplifiers in the black link could raise the noise floor above the value of minimum average input power [unamplified] in Table 154-9, implementations may wish to consider the presence of a compliant 100GBASE-R signal in determining the setting of the SIGNAL\_DETECT value.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See resolution to comment #69.

Cl 1 SC 1.4.35a P22 L5 # 81

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type ER Comment Status D

The term "coherent" only appears 2x in D2.0 of P802.3ct, its use in defining the term "100GBASE-ZR" is not helpful to the reader

*SuggestedRemedy*

replace current definition with -"An IEEE 802.3 family of Physical Layer devices using 100GBASE-R encoding and a PMD that employs dual polarization differential quadrature phase shift keying (DQPSK) modulation. (See IEEE Std 802.3, Clause 154.)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. Related to comments 63 and 139.

Cl 154 SC 154.1 P99 L8 # 82

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type ER Comment Status D

The term "coherent" only appears 2x in D2.0 of P802.3ct, its use in this sentence is not helpful -  
"The optical signal generated by this PMD type is modulated using a dual polarization differential quadrature phase shift keying (DP-DQPSK) format suitable for reception by a coherent optical receiver."

*SuggestedRemedy*

Replace this sentence with  
The optical signal generated by this PMD type is modulated using a dual polarization differential quadrature phase shift keying (DP-DQPSK) format.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 1 SC 1.4.160a P22 L14 # 83

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type ER Comment Status D

A "black Link" is an approach to describing a DWDM Channel, not a link itself.

SuggestedRemedy

Change definition -  
A black link s an approach to defining a single-mode fiber based DWDM channel by specifying the characteristics of the input and output of the link and its transfer characteristics, without specifying how the link is defined.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

Cl 1 SC 1.4.237 P22 L25 # 84

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type ER Comment Status D

There is no definition for DWDM

SuggestedRemedy

add definition for DWDM -  
An optical WDM technology where the frequency spacing is less than or equal to 1000 GHz.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. See response to comment 61.

Cl 1 SC 1.4.401A P22 L40 # 85

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type ER Comment Status D

The term "SOP" is only used 2x in D2.0, both times in 1.4.401a in the base 802.3 standard, SOP stand stands for "Start-of-packet propagation delay" and is defined in 27.3.1.3.3. Its use is isn Clauses 27, 29, 41, and 61.

SuggestedRemedy

Replace sentence with -  
1.4.401a Polarization Dependent Loss: The variation of insertion loss due to a variation of the state of polarization over all states of polarization within the channel frequency range (DWDM link) or channel wavelength range (CWDM and WWDM links).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. See response to comment 131, 132 and 133.

Cl 80 SC 80.1.3 P48 L5 # 86

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type ER Comment Status D

While it is true that 100GBASE-Z uses 100GBASE-R encoding, it uses a different modulation approach, but this is not shown architecturally in Fig 80-1.

SuggestedRemedy

Redraw Fig 80-1 to include a stack for 100GBASE-Z  
Delete "In Figure 80-1 change the list of medium types under CGMII as follows:  
"100GBASE-R, or 100GBASE-P, or 100GBASE-Z." with proper strike-out and underline.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See response to comment 15.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 80 SC 80.1.4 P48 L36 # 87

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type TR Comment Status D

The description of the 100GBASE-ZR PHY does not describe the nature of the agreed upon PHY - which is that a 100GBASE-ZR PHY may support operation of a single DWDM link over 1 to 48 DWDM channels comprised of Tx and Rx signaling, where the abilities are defined for the device and selected by the users

SuggestedRemedy

Change description to -  
100 Gb/s PHY using 100GBASE-R encoding capable of transmission over a specified channel on a defined DWDM grid in each direction of transmission with reach up to at least 80km (see Clause 154).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

Cl 82 SC 82.3.3 P56 L14 # 88

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type TR Comment Status D

This note is specific to the mapping of 40GBASE-R PCS blocks. Editing it is not within scope of the approved P802.3ct PAR.

SuggestedRemedy

these proposed changes should be deleted.

Proposed Response Response Status W

PROPOSED REJECT.

There is no substantive change to 40GBASE-R PHY-related specifications made by the P802.3ct project. The indicated change is an editorial "knock on" effect of the fact that P802.3ct changes ITU-T G.709 from being a bibliographic reference to being a normative reference. Since P802.3ct moves the ITU-T G.709 reference from Annex A (bibliography) into the normative references in clause 1.3, the reference citations in the warning note in clause 82 need to be updated accordingly.

Cl 152 SC 152.1.1 P57 L13 # 89

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type E Comment Status D

This language is too far reaching - "used across a chip-to-chip or chip-to-module interface" . The spec cares about IEEE defined interfaces, not just chip-to-chip or chip-to module interface and a different FEC is used for the PMD."

SuggestedRemedy

Replaces "is used across a chip-to-chip or chip-to-module interface" with "is used with any physical instantiation of 100GAUI-n and a different FEC is needed for the intended PMD."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change "is used across a chip-to-chip or chip-to-module interface" to "is used across a physically instantiated 100GAUI-n"

Cl 80 SC 80.1.5 P49 L23 # 90

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type TR Comment Status D

The multiple optional AUIs and FEC will not be clear to the general user to easily figure out, plus defining the inverse RS-FEC sublayer as optional isn't really the best descriptor. It is more "conditional" meaning that its use is dependent on whether an optional 100GAUI-n is used. Providing more description here would make the standard more readable to the general user.

SuggestedRemedy

- 1) Modify note a to "O=optional, M=Mandatory, C=Conditional
- 2) change Clause 152 Inverse RS-FEC from M to C, and add an indicator for Note b in next to "C"
- 3) add note B - Clause 152 inverse RS-FEC needed when deploying Clause 91 RS-FEC in combination with 100GAUI-n defined by 135D, 135E, 135F, or 135G
- 4) add similar note to Table 154-1

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. See response to comment 66.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 152 SC 152.1.2 P58 L21 # 91

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

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

A generic FEC block is used which is because there are different FECs may be used with different PHYs. The same is true for PMAs. Therefore these two sublayers are conditional based on phy type

*SuggestedRemedy*

For Fig 152-1, add note "1" next to FEC and PMA sublayers, add note that states "Conditional based on PHY type". See Fig 80-1 for reference of implementation of note. Also modify Figures 135A-9, 135A-10 in a similar fashion.

Proposed Response Response Status **W**

PROPOSED REJECT.

In the case of Figure 80-1 Note 1, the need for any FEC layer is indeed conditional based on PHY type, as certain 100GBASE-R PHYs don't use FEC. There is never a case where Inverse RS-FEC would be used that wouldn't insert a different FEC for the PMD. So the existence of a FEC sublayer below is not conditional, although there is a PHY type dependency regarding which FEC would be used (which is why the generic "FEC" is used rather than RS-FEC or SC-FEC). A similar practice is provided for the "PMA" which is a different PMA depending on the PHY type, but in the context of this sublayer, can just be referred to generically.

Cl 154 SC 154.1 P99 L7 # 92

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

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

Wording can be improved.

*SuggestedRemedy*

This clause specifies the 100GBASE-ZR PMD together with the associated medium, which is a single-mode fiber based DWDM channel which may contain one or more optical amplifiers and is described in the form of a black link (see 154.6).

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

Cl 1 SC 1.4 P22 L34 # 93

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

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

For a DWDM system the presence of an optical mux / demux is key, as illustrated in Fig 154-3, and should be explicitly stated in the definition..

*SuggestedRemedy*

Change definition of 1.4.237d DWDM System to  
An aggregate of DWDM links optically multiplexed and demuxed onto and off of either a single optical fiber or a single optical fiber per direction.

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. See response to comment 130.

Cl 154 SC 154.6 P105 L36 # 94

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

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

This sentence does not adequately describe the operation of the 100GBASE-ZR PMD - This subclause provides details of the medium associated with the 100GBASE-ZR PMD, over which the PHY operates at a single optical frequency (often also referred to by its associated wavelength) on a defined frequency grid. Given the differences between 100GBASE-ZR and 400GBASE-ZR in respect to the channel spacing, this should be clearly called out.

*SuggestedRemedy*

Replace sentence -  
This subclause provides details of the medium associated with the 100GBASE-ZR PMD, over which the PHY operates at a single optical frequency (often also referred to by its associated wavelength) on a defined frequency grid.  
With  
This subclause provides details of the medium associated with the 100GBASE-ZR PMD, over which the PHY operates at a single optical frequency (often also referred to by its associated wavelength) on a defined frequency grid consisting of 48 channels based on a 100 GHz center channel spacing specified in Table 154-6.

Proposed Response Response Status **W**

PROPOSED REJECT.

The sentence in the referenced paragraph provides some generic information and details on number of channels and spacing is not improving the quality of the draft at this point of 154.6.

100GBASE-ZR and 400GBASE-ZR do have a different channel spacing which is one of the parameters addressed in the subclause on 154.7 for 100GBASE-ZR and the choice of frequencies are addressed in the third paragraph of 154.6.

See also resolution to comment #95, where channel spacing is addressed.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 154.6 P106 L31 # 95

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type TR Comment Status D

There is no requirement for a 100GBASE-ZR PHY to support all 48 channels. Additionally, it is not noted that a user needs to configure a 100GBASE-ZR Tx with a 100GBASE-ZR Rx, which support the same channel index numbers.

*SuggestedRemedy*

Add sentence at end of paragraph -  
A 100GBASE-ZR PHY implementation may support 1 to 48 channel frequencies over a DWDM system. Configuration of a DWDM link with a 100GBASE-ZR Tx and Rx to support the same channel frequency is necessary.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

It is proposed to modify the last sentence of the third paragraph (under Figure 154-3) "The 100GBASE-ZR PMD specification covers a maximum of 48 channels over a DWDM system, supporting between 1 and 48 channels."

to  
"The 100GBASE-ZR PMD specification covers a maximum of 48 channels over a DWDM system, supporting between 1 and 48 channels, with a channel spacing of at least 100 GHz."

Furthermore add an additional sentence to the end of the third paragraph of 154.6  
"It may be necessary to configure the combination of 100GBASE-ZR Tx, the associated DWDM link and a 100GBASE-ZR Rx to support the same channel frequency."

Cl 154 SC 154.6 P105 L38 # 96

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type TR Comment Status D

The use of the term "channel" in IEEE 802.3 can be confusing to some based on their point of reference, as it sometimes refer to the medium between the Tx and Rx. In the case of P802.3ct, it is used to describe both the medium between the tx and rx, as well as in reference to the frequency of the optical wavelength (i.e. channel index number, channel center frequency, approximate channel center wavelength).

*SuggestedRemedy*

change  
The medium associated with the 100GBASE-ZR PMD is also referred to as a DWDM channel which is defined as the transmission path over a single wavelength/frequency on a defined frequency grid between a DWDM PHY transmitting to another DWDM PHY.  
To  
The medium associated with the 100GBASE-ZR PMD is also referred to as a DWDM channel which is defined as the transmission path over a single wavelength/frequency (referred to either by Channel Index Number or Channel Center Frequency) on a defined frequency grid between a DWDM PHY transmitting to another DWDM PHY.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

Cl 154 SC 154.6 P105 L39 # 97

Dambrosia, John Futurewei, A U.S. Subsidiary of Huawei

Comment Type TR Comment Status D

The definition in the body of the text for DWDM Channel is  
"the transmission path over a single wavelength/frequency on a defined frequency grid between a DWDM PHY transmitting to another DWDM PHY."  
This does not match the definition in 1.5.237a.

*SuggestedRemedy*

Replace definition in 1.4.237a with the noted definition that was in the body of the text.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 154.6 P105 L36 # 98  
 Lewis, David Lumentum  
 Comment Type E Comment Status D Bucket  
 The formatting of text in 154.6 and 154.7 appears different to the other clauses. Perhaps tighter line spacing or a different font size.  
*SuggestedRemedy*  
 Check and change the style to match the rest of the clause.  
*Proposed Response* Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Implement remedy with editorial license.

Cl 154 SC 154.8.21 P113 L18 # 99  
 Lewis, David Lumentum  
 Comment Type E Comment Status D Bucket  
 The font is in italics.  
*SuggestedRemedy*  
 Change to the same style as other sub-clauses.  
*Proposed Response* Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See resolution to comment #14

Cl 154 SC 154.11.4.6 P119 L9 # 100  
 Lewis, David Lumentum  
 Comment Type T Comment Status D Bucket  
 Item OC2 references IEC 61753-1-1, which has been withdrawn and replaced by IEC 61753-1: 2018.  
*SuggestedRemedy*  
 Change the first reference to IEC 61753-1.  
*Proposed Response* Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See resolution to comment #24

Cl 1 SC 1.4 P22 L17 # 101  
 Maki, Jeffery Juniper Networks  
 Comment Type E Comment Status D bucket  
 Italic comment text Insert the following new definition after 1.4.181 "channel insertion loss": and text below refers to the wrong sub-clause of IEEE Std 802.3-2018.  
*SuggestedRemedy*  
 Change 1.4.181 to 1.4.180, and 1.4.181a to 1.4.180a.  
*Proposed Response* Response Status W  
 PROPOSED ACCEPT.

Cl 153 SC 153.3.2.3.2 P95 L34 # 102  
 Maki, Jeffery Juniper Networks  
 Comment Type ER Comment Status D  
 Sub-clause is self referencing. Reference to 153.3.2.3.2 is erroneous.  
*SuggestedRemedy*  
 Replace 153.3.2.3.2 with 153.3.2.2.2.  
*Proposed Response* Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Replace 153.3.2.3.2 with 153.3.2.2.1

Cl 153 SC 153.2.3.2.4 P85 L46 # 103  
 Maniloff, Eric Ciena  
 Comment Type T Comment Status D bucket  
 The text reads "whose fill level varies depending on whether 188 or 189 GMP words are filled in a given SC-FEC frame." should include that the fill level varies with the clock offset of the 100GBASE-R signal.  
*SuggestedRemedy*  
 Modify text to read "whose fill level varies with the clock offset of the incoming 66B blocks and depending on whether 188 or 189 GMP words are filled in a given SC-FEC frame."  
*Proposed Response* Response Status W  
 PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 154.5.4 P104 L32 # 104

Maniloff, Eric

Ciena

Comment Type T Comment Status D

For the OSNR allowed by this specification, the integrated noise power after the demux may be only ~7dB lower than the signal power. As such a note in Table 154-5 indicating that SIGNAL\_DETECT may not be a reliable indicator of the optical signal if average power detection is used should be added.

SuggestedRemedy

Add note to Table 154-5 indicating "For amplified systems using average power for Signal Detect, the Signal Detect value may not indicate FAIL when the Optical Signal is below its specified threshold in Table 154-9"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
For TF discussion.  
See resolution to comment #69.

Cl 154 SC 154.5.4 P104 L32 # 105

Maniloff, Eric

Ciena

Comment Type T Comment Status D

Rather than Optical Power the Receive Condition should refer to Signal Power

SuggestedRemedy

Change "Average Optical" to "Optical signal"

Proposed Response Response Status W

PROPOSED REJECT.  
The commenter has made insufficiently clear why changing "average optical power" to "optical signal power" resolves the issue, also raised in other comments, on SIGNAL\_DETECT and how this would improve the quality of the draft.  
See also resolution to comment #69

Cl 154 SC 154.7.1 P108 L24 # 106

Maniloff, Eric

Ciena

Comment Type E Comment Status D

1000 kHz = 1 MHz

SuggestedRemedy

Replace 1000 kHz with 1 MHz

Proposed Response Response Status W

PROPOSED REJECT.  
It is common in the optical industry to express transmitter line width in kHz instead of MHz

Cl 154 SC 154.7.1 P108 L33 # 107

Maniloff, Eric

Ciena

Comment Type E Comment Status D Bucket

OSNR Units should be dB / .1nm

SuggestedRemedy

change unit column to dB (0.1nm)

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 154 SC 154.7.1 P108 L38 # 108

Maniloff, Eric

Ciena

Comment Type T Comment Status D

Note a applies to both amplified and unamplified systems. For design of the black link, it is necessary to know the input signal power and OSNR in order to ensure the Rx OSNR requirement is met.

SuggestedRemedy

Remove footnote a entirely.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
For Task Force discussion

Cl 154 SC 154.7.3 P109 L44 # 109

Maniloff, Eric

Ciena

Comment Type T Comment Status D

S<sub>0</sub> often refers to the Slope of the Chromatic Dispersion at the Zero Dispersion Wavelength. I believe this parameter refers to the minimum dispersion in the operating wavelength range. Also, "Fiber dispersion" doesn't align with other specs for chromatic dispersion.

SuggestedRemedy

Change Description to "Minimum chromatic dispersion slope in operating wavelength range"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
For TF discussion.  
Could be addressed by removing "S0"

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 154 SC 5.4 P104 L43 # 110

John, DeAndrea Finisar / II-VI

Comment Type T Comment Status D

The use of optical amplifiers ion the black link create additional noise conditions for this PMD type.

SuggestedRemedy

Add the following to the note ", optical amplifier noise in the Black Link, etc."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
See resolution to comment #69.

Cl 154 SC .2 P101 L28 # 111

John, DeAndrea Finisar / II-VI

Comment Type E Comment Status D

The black lenj with amplifiers will result in power levels greater than -30 dBm at TP3. See contribution "deandrea\_3ct\_01 June 11 2020 Rev 0.4.pdf"

SuggestedRemedy

Add addtioanl statement in the note: " Black links with optical amplifiers will result in average power exceeding -30 dBm when transmit is in the "OFF" state, a implimentations should take this condition into account"

Proposed Response Response Status W

PROPOSED REJECT.  
The section for which the modification is proposed is generic and adding details of this level, even is a note, is not appropriate.

See also resolution to comment #69, which is more specific on the details of the definition of SIGNAL\_DETECT.

Cl 153 SC 153.2.4.1.1 P90 L13 # 112

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D

Booolean ...' should read 'Boolean ...'.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 153 SC 153.2.4.1.1 P89 L34 # 113

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status D bucket

Suggest that 'A variable set ...' should read 'A Boolean variable set ...'.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 152 SC 152.5.3.2 P65 L16 # 114

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D bucket

Figure 82.14' should read 'Figure 82-14'.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 153 SC 153.2.3.3.4 P88 L20 # 115

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D bucket

Suggest that '0x1e' should be '0x1E', See figure 82-5.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 153 SC 153.2.4.4 P91 L7 # 116

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status D

States COUNT\_2 and COUNT\_NEXT in Figure 153-7 'SC-FEC synchronization state diagram' include the action 'start fas\_counter'. Subclause 153.2.4 'Detailed functions and state diagrams' states that 'The notation used in the state diagrams follows the conventions of 21.5. The notation ++ after a counter or integer variable indicates that its value is to be incremented.'. Neither this subclause, nor the referenced subclause 21.5, defines a start action for a counter, and what it means.

SuggestedRemedy

Change 'start fas\_counter' to read 'fas\_counter <= 0' in both the States COUNT\_2 and COUNT\_NEXT states.

Proposed Response Response Status W

PROPOSED REJECT.

fas\_counter works differently than some other counters that increment as you go through a state multiple times (e.g., fas\_bad\_count increments each time you cycle through the INVALID\_FAS state).

When you "Start fas\_counter", you remain in that state until "fas\_counter\_done" is true, which is after you have counted off 16320 octets until the next place you expect to find the FAS. I propose not to add explicit loops that show incrementing fas\_counter until you get to the value 16320.

Cl 153 SC 153.2.4.4 P91 L27 # 117

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D

Typo, the assignment '... <= current\_fecil' in state COUNT\_NEXT of Figure 153-7 should read '... <= current\_fec'.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Overtaken by events. This is fixed in the reviewed text proposal reviewed in the 11 June 2020 Interim Task Force call. See comment #56

Cl 153 SC 153.2.4.4 P91 L41 # 118

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status D

The variable FEC\_lane\_mapping<x> assigned the value fec\_lane in the state 2\_GOOD of Figure 153-7 is not defined in subclause 153.2.4.1.1 'Variables'.

SuggestedRemedy

Add a definition of the variable FEC\_lane\_mapping<x> to subclause 153.2.4.1.1 'Variables'.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add:

FEC\_lane\_mapping<x>

This variable indicates which FEC lane is received on lane x of the PMA service interface when fas\_lock<x>=TRUE, where x=0:19.

Cl 152 SC 152.5.4.2.1 P70 L49 # 119

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D bucket

Suggest that 'A variable set ...' should read 'A Boolean variable set ...'.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 153 SC 153.2.1 P80 L50 # 120

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D bucket

Suggest that '... information to and from the FEC.' should read '... information to and from the SC-FEC.'.

SuggestedRemedy

See comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 153 SC 153.2.1 P80 L50 # 121

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status D bucket

Can't the sublayer 'above' the SC-FEC also be an Inverse RS-FEC (see Figure 152-1) or a PMA (see Figure 83C-8 as well as Page 81, Line 7)?

*SuggestedRemedy*

[1] Page 80, line 50 that '... the PCS to ...' should be change to '... the PCS, Inverse RS-FEC, or PMA to ...'.

[2] Page 81, line 7 that '... the PCS or PMA ...' should be change to '... the PCS, Inverse RS-FEC, or PMA ...'.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 153 SC 153.2.3.2.4 P85 L13 # 122

Law, David Hewlett Packard Enterprise

Comment Type T Comment Status D

The middle row of Table 153-1 'Encoding of GMP words in next SC-FEC frame' shows the encoding of 'GMP words' in a 188 GMP word frame when the next frame is 189 GMP word frame.

The text on page 85, lines 13-14 says when the current frame is a 189 GMP word frame, and the next frame is 188 GMP word frame 'This is signaled by inverting all of the even-numbered C bits (C12, C10, C8, C6, C4, C2, C0) from the value in the previous frame, setting the decrement indicator (DI bit) to one, and setting the increment indicator (II bit) to zero.'

As two consecutive 189 GMP word frames cannot occur (see page 84 line 50-51), the text on page 85, lines 13-14 must be applied to middle row of Table 153-1 as the previous frame has to have been a 189 GMP word frame following a 188 GMP word frame.

If this is the case bit C0 is a '0' in the previous frame and, therefore, if inverted as described by the text on page 85, lines 13-14, there should be a '1' for C0 in the last row of Table 153-1. It's also doesn't seem clear from page 85, lines 13-14 what to do with the odd numbers C bits.

It seems that the C bits in this case are calculated based on the number of words in the next frame, then replacing the even-numbered C bits with the inverse of their value from the previous frame.

*SuggestedRemedy*

Clarify the description of the C bits if required.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

On page 85 line 12, change:

"inverting all of the even-numbered C bits (C12, C10, C8, C6, C4, C2, C0) from the value in the previous frame"

to

"inverting all of the even-numbered C bits (C12, C10, C8, C6, C4, C2, C0) from the numeric value of GMP words filled in the previous frame (189)"

As clarification (this part not affecting the text), you are flipping even numbered bits of the fill value, even though in this case, the previous frame signals that fill value by signaling an increment indicator from 188 rather than actually showing the value 189 which persists for a single frame.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 153 SC 153.2.3.2.4 P84 L9 # 123

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D

Subclause 10.5.1 'Citation as a normative reference' of the IEEE-SA Standards Style Manual says 'Note that in-text reference to a specific clause, subclause, table, or figure of another document shall be dated even if the undated version of the document is listed in the normative references.'

SuggestedRemedy

Please provide a dated reference for '... ITU-T G.709 Clause 19.4.3.2.'

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
Change "ITU-T G.709" to "ITU-T G.709 (06/2020)"

Cl 153 SC 153.2.3.2.4 P83 L51 # 124

Law, David Hewlett Packard Enterprise

Comment Type E Comment Status D bucket

Suggest that the abbreviations 'GMP OH' used in Figure 153-3 'SC-FEC frame' should be referenced here.

SuggestedRemedy

Suggest the text 'The GMP mapping overhead is encoded ...' should be changed to read 'The GMP mapping overhead (GMP OH) is encoded ...'.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 135A SC 135A.3.2 P123 L26 # 125

Dawe, Piers Nvidia

Comment Type E Comment Status D bucket

INTERFACEMMD

SuggestedRemedy

Insert the break

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 83C SC 83C.4.1 P121 L34 # 126

Dawe, Piers Nvidia

Comment Type E Comment Status D

Too much spacing

SuggestedRemedy

Use left justification rather than full

Proposed Response Response Status W

PROPOSED REJECT.

Unclear what the commenter is asking for. The format is consistent with other figures in Annexes 83C and 135A. None are left justified.

Cl 135A SC 135A.3.1 P122 L36 # 127

Dawe, Piers Nvidia

Comment Type E Comment Status D

Silly hyphenation. Inter-face would make sense, in-terface doesn't.

SuggestedRemedy

Set the minimum hyphenation fragment size to 3 (I thought that was done years ago), and make the left column wider.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement the proposed remedy with editorial license

Cl 154 SC 154.11.4.6 P119 L1 # 128

Dawe, Piers Nvidia

Comment Type E Comment Status D Bucket

Blank Link

SuggestedRemedy

black link

Also, to match the rest of the document, Black Link requirements should be Black link requirements

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change "Black Link" to "Black link"

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 1 SC 1.4.160a P22 L14 # 129  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status D bucket  
 To match the rest of the document, Black Link should be black link  
 SuggestedRemedy  
 Scrub the new definitions for rogue capitals  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 See response to comment 3.

Cl 1 SC 1.4.237b P22 L28 # 130  
 Dawe, Piers Nvidia  
 Comment Type T Comment Status D  
 According to 154.6, the black link extends from TP2 to TP3, excluding the PHYs. 1.4.160a says that the black link is a link. 1.4.302 says that a link is the transmission path between any two interfaces of generic cabling. (From ISO/IEC 11801.) Implying that it doesn't include the PHYs. This draft definition for DWDM Link includes the PHYs.  
 SuggestedRemedy  
 Rename "DWDM Link" to something not "link" and use the corrected name in 1.4.237d DWDM System.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 For task force discussion. See response to comment 93.

Cl 1 SC 1.4.401a P22 L40 # 131  
 Dawe, Piers Nvidia  
 Comment Type E Comment Status D  
 Gratuitous abbreviation: SOP is not used anywhere but this sentence.  
 SuggestedRemedy  
 Just write it out, the simple way: The variation of insertion loss due to a variation of the state of polarization over all states of polarization  
 Or, if a measure of the range is meant, rather than the concept that there is a range, perhaps:  
 The range of insertion losses over all states of polarization  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 For task force discussion. See response to comment 85, 132 and 133.

Cl 1 SC 1.4.401a P22 L40 # 132  
 Dawe, Piers Nvidia  
 Comment Type T Comment Status D  
 What is this detail "within the channel frequency range (DWDM link) or channel wavelength range (CWDM and WWDM links)" doing here? 1.4 definitions should be short, simple and high level. There's no other mention of CWDM in this document, and PDL is something that happens without WDM anyway.  
 SuggestedRemedy  
 Create a new subsection near 154.8.17 to define precisely over what conditions PDL is defined. Delete "within the channel frequency range (DWDM link) or channel wavelength range (CWDM and WWDM links)" from here; add something such as "...loss of an instance of fiber optic cabling" to indicate that PDL is something to do with fibre optics.  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 For task force discussion. See response to comment 85, 131 and 133.

Cl 131 SC 1.4.401a P22 L40 # 133  
 Dawe, Piers Nvidia  
 Comment Type T Comment Status D  
 State of polarization of what?  
 SuggestedRemedy  
 Of an optical signal? optical transmitter?  
 Proposed Response Response Status W  
 PROPOSED ACCEPT IN PRINCIPLE.  
 For task force discussion. See response to comment 85, 131 and 132.

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 135A SC 135A.3.1 P122 L35 # 134

Dawe, Piers

Nvidia

Comment Type T Comment Status D

There is no such thing as 100GBASE-Z/P. Do you mean 100GBASE-ZR? Or, 100GBASE-Z or 100GBASE-P?

Is the BASE-P part for P802.3ck to add, not this project?

Why would Z come before P? Usually we go slow to fast, short to long, wide to narrow.

SuggestedRemedy

Change to:100GBASE-Z, or change to: 100GBASE-P or 100GBASE-Z. Also in Figure 135A-10.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change "100GBASE-Z/P" to "100GBASE-P/100GBASE-Z" (consistent with Figure 83C-3)

Cl 154 SC 154.8.21 P113 L18 # 135

Dawe, Piers

Nvidia

Comment Type E Comment Status D Bucket

Is there a reason that this sentence is in italics?

SuggestedRemedy

Update sentence if necessary; change to upright

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See resolution to comment #14

Cl 154 SC 154.8.16 P112 L48 # 136

Dawe, Piers

Nvidia

Comment Type E Comment Status D Bucket

this Clause

SuggestedRemedy

this clause

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 1 SC 1.4.181a P22 L20 # 137

Dawe, Piers

Nvidia

Comment Type T Comment Status D

"WDM application": weasel word: no specific meaning or ambiguous

SuggestedRemedy

WDM wavelength plan

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

Cl 1 SC 1.4.181a P22 L20 # 138

Dawe, Piers

Nvidia

Comment Type T Comment Status D

I think that the implication that no other grids but ITU-T ones are possible is incorrect and not necessary.

SuggestedRemedy

If it's true, and I think it is because Clause 54 uses "WWDM", insert "In this standard" before "DWDM channel spacings". Delete the sentence about CWDM if it's not needed, or join the sentences.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion.

This would be a generic definition for all applicable standards so cannot use the phrase "In this standard". Replace "DWDM channel spacings" with "Typical DWDM channel spacings". Replace "CWDM channel spacings" with "Typical CWDM channel spacings".

IEEE P802.3ct D2.0 100 Gb/s over DWDM systems Initial Working Group ballot comments

Cl 1 SC 1.4.35b P22 L8 # 139

Dawe, Piers Nvidia

Comment Type T Comment Status D

Saying that 100GBASE-ZR uses 100GBASE-R encoding, with identical wording to e.g. "100GBASE-SR4: IEEE 802.3 Physical Layer specification for 100 Gb/s using 100GBASE-R encoding" is very misleading. There's a lot of extra complexity here that isn't covered by "DP-DQPSK modulation".

*SuggestedRemedy*

Change "using 100GBASE-R encoding and DP-DQPSK modulation" to "using 100GBASE-R encoding, GMP, SC-FEC, and DP-DQPSK modulation".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

For task force discussion. Related to comments 63 and 81.

Cl 154 SC 154.8.16 P112 L46 # 140

Dawe, Piers Nvidia

Comment Type TR Comment Status D

While G.698.2 gives the concept of receiver OSNR tolerance and says what's in and what's out, it is normal in Ethernet optical PMD specifications to have a more specific definition "Stressed receiver sensitivity" to avoid ambiguity and give an example of how one might actually assure that a receiver complies. I don't see why this PMD should not need it too. Writing the stressed receiver sensitivity section can be painful because it makes one clarify what one means - it's where the rubber hits the road.

*SuggestedRemedy*

Add a stressed receiver sensitivity section, following other clauses

Proposed Response Response Status W

PROPOSED REJECT.

The commenter has not demonstrated that the current specification is broken or incomplete and not demonstrated that adding a definition and specification of "stressed receiver sensitivity" would improve the quality of the draft.

Furthermore the remedy does not contain a specific proposal to modify the draft in such a way that it would improve it on the basis of evidence provided.

The commenter is invited to develop a detailed proposal for stressed receiver sensitivity with evidence that adding such a requirement will improve the quality of the draft.

Cl 154 SC 154.7.1 P108 L31 # 141

Dawe, Piers Nvidia

Comment Type T Comment Status D

An EVM limit is like 802.3cd's clumsily named TDECQ-10.log10(Ceq), which is sometimes called K. It's a good thing to have but with a 7-spaced T-spaced equalizer, remarkably slow signals are possible that cause a large noise enhancement penalty. Has this been investigated and bounded?

Do you want to require all transmitters or receivers that work in practice with reasonable transmitter speeds to carry the burden of having to work with such super-slow but EVM-compliant signals?

*SuggestedRemedy*

Consider adding the equivalent of a TDECQ limit in the EVM method. Consider an average power - TDECQ substitute if the range of good to bad is very large.

Proposed Response Response Status W

PROPOSED REJECT.

The commenter has not demonstrated that the current specification is broken or incomplete. The comment is speculative and also written in the form of a question to the Task Force. Furthermore the remedy does not contain a specific proposal to modify the draft in such a way that it would improve it on the basis of evidence provided.