Cl **190** *SC* **190.3.3.6.4** *P* **85** *L* **10** # 1

Lewis, Jon — Dell Technologies

Comment Type **E** *Comment Status* **A** *EZ*

The Text SXn[0] indention is different from line 3 text. This occurs on lines 24-25 on page 85 also.

SuggestedRemedy

Adjust the indents to be the same for the text on lines 3-6, 10-3 and 24-25. not sure which line(s) are actually the correct indent setting.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.3.7** *P* **88** *L* **4** # 2

Maguire, Valerie — Copperopolis; aff'l w/ CME Consulting , Cisco, and An

Comment Type **E** *Comment Status* **A** *EZ*

0 should be zero and 1 should be one.

SuggestedRemedy

Replace, " is set to 1 when eee_low_snr is TRUE and is set to 0 otherwise"

with, " is set to one when eee_low_snr is TRUE and is set to zero otherwise"

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.5.7.4** *P* **50** *L* **16** # 3

Maguire, Valerie — Copperopolis; aff'l w/ CME Consulting , Cisco, and An

Comment Type **E** *Comment Status* **A** *EZ*

"dc" should be "DC"

SuggestedRemedy

Change "dc" to "DC" in 7 locations in this paragraph. In the 5 locations representing existing text, show "dc" in strikethrough and "DC" in underline. (Note there is a supporting comment that adjusts the PICS for the existing text.)

Response *Response Status* **C**

REVISEDEditors do a global change from "DC" to "dc".

Cl **104** *SC* **104.9.4.3** *P* **53** *L* **27** # 4

Maguire, Valerie — Copperopolis; aff'l w/ CME Consulting , Cisco, and An

Comment Type **E** *Comment Status* **R** *EZ*

"dc" should be "DC"

SuggestedRemedy

Change "dc" to "DC" in PICS PD21a and PD21b. Change "dc" to "DC", with dc in strikethrough and DC in underline, in PICS PD21. Bring in PD20 and PD22 and change "dc" to "DC", with dc in strikethrough and DC in underline.

Response *Response Status* **Z**

REJECTED

This comment was WITHDRAWN by the commenter.

Cl **190** *SC* **190.7.1.3** *P* **131** *L* **41** # 5

Maguire, Valerie — Copperopolis; aff'l w/ CME Consulting , Cisco, and An

Comment Type **T** *Comment Status* **A** *EZ*

"Maximum link delay" should be "Maximum link segment delay"

SuggestedRemedy

Change "Maximum link delay" to "Maximum link segment delay" in the clause 190.7.1.3 header and in PICS LMF4.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.1** *P* **71** *L* **50** # 6

Maguire, Valerie — Copperopolis; aff'l w/ CME Consulting , Cisco, and An

Comment Type **T** *Comment Status* **A** *EZ*

Double "shall" requirement. I think the mandatory PCS Reset action is already specified on P71, L44.

SuggestedRemedy

Change "PCS Reset shall set pcs_reset = TRUE" to "PCS Reset sets pcs_reset = TRUE" and delete PICS PCST4

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.2.1** *P* **143** *L* **8** # 7

Maguire, Valerie — Copperopolis; aff'l w/ CME Consulting , Cisco, and An

Comment Type **E** *Comment Status* **A** *EZ*

Error in numbering.

SuggestedRemedy

Change "PCST3" to "PCST1" and re-number PICS in this subcaluse.

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.5.1.1.4** *P* **25** *L* **39** # 8

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The text "For 10BASE-T1L, 100BASE-T1L, and 100BASE-T1, a link_status of OK maps to the enumeration ¶available÷. All other states of link_status map to the enumeration ¶not available÷." seems to be doubled in the paragraph. In the new text "Other encodings map to the enumeration available." "available" is not set in quotation marks as in other locations within the paragraph.

SuggestedRemedy

Remove doubled text passage and add quotation marks around "available".

Response *Response Status* **C**

REVISEDRemove text "For 10BASE-T1L and 100BASE-T1, a link_status of OK à enumeration "not available"" from line 41 to line 42.Add quotation marks around "available"

Cl **30** *SC* **30.6.2** *P* **27** *L* **17** # 9

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **R** *EZ*

Throughout Clauses 30.6.2 and 30.6.3 in several places a "." followed by ";" is used at the end of a sentence.

SuggestedRemedy

Remove spurious ";" where the ";" follows a "." at the end of a sentence.

Response *Response Status* **C**

REJECTEDCRG Disagrees with commenter. The ".;" while not correct English is the correct usage in the syntax of Clause 30 management definitions.

Cl **30** *SC* **30.6.2.1.3** *P* **27** *L* **32** # 10

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Management*

"INTEGER" should be "BOOLEAN" and link reference is missing.

SuggestedRemedy

Change "INTEGER" to "BOOLEAN". Add reference "(see 45.2.7.28.2)" at the end of the sentence in line 35.

Response *Response Status* **C**

REVISEDAccomodated by comments 163 and 119.

Cl **30** *SC* **30.6.3.1.1** *P* **29** *L* **26** # 11

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"10BASE-T1L (Clause 190)" need to reference "100BASE-T1L" instead of "10BASE-T1L". "100BASE-T1L (Clause 146)" needs to reference "(Clause 190)" instead of "(Clause 146)".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.1.236b.1** *P* **33** *L* **41** # 12

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"transmit/receive level ability (1.2301.13)" should read as "Standard transmit/receive level ability (1.2301.13)" in the headline. "an standard transmit/receive level" should read as "a standard transmit/receive level" in lines 43 and 45 in the text.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISEDChange the title 45.2.1.236b.1 to "Standard transmit..."Accomodated by comment 174.

Cl **45** *SC* **45.2.3.75c** *P* **37** *L* **16** # 13

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Space before beginning of the last sentence in the paragraph is missing. See also page 38, line 5 for a second occurrence.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.3.75d.2** *P* **38** *L* **32** # 14

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Editorial*

Text seems to be missing as only "um TC receive path data delay." is stated instead of a more detailed description.

SuggestedRemedy

Add original text.

Response *Response Status* **C**

REVISEDDelete P38 L32 through 53 ("um TC" through end of Table 45-302)

Cl **45** *SC* **45.2.7.29.1** *P* **40** *L* **22** # 15

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Font size in "7.529.15" mismatches.

SuggestedRemedy

Align font size. See also page 43, lines 39 and 43 and page 44, lines 19 and 23.

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.7.30** *P* **40** *L* **37** # 16

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Should read as "Ó when evaluating the downshift trigger" (adding "the") as in the previous row of the table.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.7.35** *P* **43** *L* **11** # 17

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"Upshift" is everywhere else written without capital letter at the beginning. Suggest to change to "upshift" in the description field.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.4.7.3** *P* **49** *L* **46** # 18

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The frequencies do not fit to that ones in the adopted text (seems to be a copying error).

SuggestedRemedy

Please change text in fifth paragraph to: "When measuring the ripple voltages for a Type E or Type H PSE as specified by Table 104¹7 item (4b), the voltage observed at the MDI/PI with the differential probe where f1 = 3.18 kHz ª 1% is post-processed with transfer function H2(f) specified in Equation (104¹3) where f2 = 0.1 MHz ª 1%." (for f1, f2 and H2(f) the numbers need to be in subscript).

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.5.1** *P* **50** *L* **7** # 19

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

After "Type E" the comma has accidently been crossed out.

SuggestedRemedy

Re-add comma after "Type E".

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.5.1** *P* **50** *L* **46** # 20

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Instead of "Type G", "Type H" needs to be referenced (see adopted text).

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.6.2** *P* **51** *L* **8** # 21

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Type E, Type G and Type H need to be referenced (see originally adopted text).

SuggestedRemedy

Change "Type F" to "Type G" and "Type G" to "Type H".

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.9.3** *P* **52** *L* **54** # 22

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Something with the bold lines style in the table went wrong. See also the first lines on page 53.

SuggestedRemedy

Correct table style.

Response *Response Status* **C**

REVISEDFix line weight at bottom of "Status" column on P52 to match others (thin) and fix header continuation on P53 (should have thick line under all header items)

Cl **104** *SC* **104.9.4.3** *P* **53** *L* **49** # 23

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Needs to reference "Type G" instead of "Type H", see originally adopted text. Also change "PCTH:M" to "PDTG:M".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **104** *SC* **104.9.4.3** *P* **53** *L* **52** # 24

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Editorial*

"PD24 | Type H PD measured ripple voltage post-processing | 104.5.7.4 | With transfer function H2(f) specified in Equation (104û3) where f2=0.1 MHz ▒1% | PDTH:M | Yes [ ] N/A [ ]" has been missed from originally adopted text (the used reference there was PD26, but renumbered, as in D2.1 it should now be PD24, "Type E" from original text has been removed, as this was not adopted). The numbers in H2(f) and f2 should be in subscript.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.1.2** *P* **56** *L* **56** # 25

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Replace "are" in "A 100BASE-T1L PHY are mandated to be capable of operating Ó" by "is" (should be singular).

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISED It should be at p56, line30 and accommdated by comment 76.

Cl **190** *SC* **190.1.2** *P* **57** *L* **3** # 26

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"ETHERNET LAYERS" should be on top of the Ethernet Layer Stack (in the middle).

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISED Move the label "ETHERNET LAYERS" abve "HIGHER LAYERS" similar to "OSI REFERENCE MODEL LAYERS" as in Figure 146-1 of IEEE 802.3-2022

Cl **190** *SC* **190.2.2** *P* **62** *L* **38** # 27

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The "PHY" is in between the MII and MDI (as before modifying the drawing). Thus it is suggested to move the word "PHY" from the right side to below the "PMA SERVICE INTERFACE" position (see original drawing).

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISED Implement proposed remedy. See Figure 146-2 for guidance.

Cl **190** *SC* **190.2.2.5.1** *P* **65** *L* **10** # 28

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"." at the end of the sentence is missing.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.1** *P* **72** *L* **1** # 29

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"PCS reset" should be "PCS Reset" with capitalized "R".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.3.6.2** *P* **82** *L* **44** # 30

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Editorial*

Seems that the elements "+ mi,3a3 + mi,2a2" are missing and need to be added (a is equivalent to alpha, "i,3 and i,2 need to be in subscript, the 3 and 2 after alpha need to be in superscript). A space should be added after the equation (before "of").

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISED At P82 L43, change equation to:m_{i,7} a^7 + m_{i,6}a^6+ à +m_{i,1}a + m_{i,0}where _{i,n} indicates a subscript i, n and "a" indicates alpha, (the ellipses "à" are intended to be there, mirroring the parenthetical)See also comment 81.

Cl **190** *SC* **190.3.5.2** *P* **92** *L* **15** # 31

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The Infofield uses 24 6B-tuples out of 32 in the block (thus 75 % of the LL Frame are used up by the 6-tuple, nevertheless the black bar is less is only about 40 % of the width, which might be confusing.

SuggestedRemedy

Width of "black marked" Infofield block should be about 75 % of LL frame duration.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.5.2** *P* **93** *L* **43** # 32

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EEE*

"Ó is inverted for the second code-group in the 16th PCS partial frame." would mean, that this is a one time event only happening in the 16th PCS partial frame, but not, as defined for Sdn[1] every 16th PCS partial frame. In comparison with figure 190-7, this would be the 15th, 31th, ... partial frame, as PFC counting starts with 0.

SuggestedRemedy

Change "Ó is inverted for the second code-group in the 16th PCS partial frame." to "Ó is inverted for the second code-group in every 16th (in the 15th, 31th, Ó) PCS partial frame."

Response *Response Status* **C**

REVISEDChange to "à is inverted for the second code-group in the 16th PCS partial frame." to "à is inverted for the second code-group in every 16th PCS partial frame."

Cl **190** *SC* **190.3.5.3** *P* **96** *L* **17** # 33

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Training uses PAM2.

SuggestedRemedy

Change "PAM3" to "PAM2".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.5.3** *P* **96** *L* **26** # 34

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *PCS*

The generation of SXn (disparity correction sign) has been unintentionally changed from D2.0 to D2.1. This change should be converted back to the original equation (with the changes from "*/+" to "AND/OR" and, if intended "otherwise" to "else").

SuggestedRemedy

Change the generation of SXn to: "SXn = ¹1 if ((DSn > 0 AND RDn-1 > 0) OR ((DSn = 0 OR RDn-1 = 0) AND Sgn = 1)) / +1 else

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.5.3** *P* **96** *L* **31** # 35

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Paragraph is written in italic, should be normal font style.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **10** # 36

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *RS-FEC*

The term "rx_coded<8N + 1:8N + 9>" is exceeding the array limits of rx_coded<0:8N>. Likely "rx_coded<8n + 1:8n + 8> with n = 0 to 7" is meant (N is either 2 or 8, while n could be a an incrementing variable, 8 * 8 + 9 would be 65 > 64 in a 0 to 64 (65 bit) array starting from 0).

SuggestedRemedy

Change "rx_coded<8N + 1:8N + 9>" to "rx_coded<8n + 1:8n + 8> with n = 0 to 2 (without RS-FEC enabled) or n = 0 to 7 (with RS-FEC enabled)".

Response *Response Status* **C**

REVISED Accomodated by comment 92.

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **13** # 37

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"2 6-bit" should read as "two 6-bit".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.3** *P* **103** *L* **22** # 38

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"8 PCS partial frames" should read as "eight PCS partial frames", see lines 12 and 17 on same page.

SuggestedRemedy

Change "8 PCS partial frames" to "eight PCS partial frames" in line 2 and line 27. Suggest to re-add a "." at the end in lines 12, 17, 22 and 27.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.1** *P* **115** *L* **46** # 39

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"training frames" should be singular ("training frame").

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.2** *P* **116** *L* **33** # 40

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

11.52 ms should be written in one line without line break between number and unit.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.3** *P* **123** *L* **5** # 41

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

In figures 190-24 and 190-25 the word with typo "imepdance" needs to be written as "impedance".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.4.1** *P* **123** *L* **37** # 42

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Referenced Figure 190-21 needs to be changed to Figure 190-23.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.4.4** *P* **124** *L* **32** # 43

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Instead of Figure 190-23, figure 190-24 needs to be referenced. Also the references to the equations need to be shifted down by 1 (Equation 190-9 --> 190-8, 190-10 --> 190-9, 190-11 --> 190-10, 190-12 --> 190-11).

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.4.4** *P* **126** *L* **4** # 44

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The equations for the Upper PSD mask go up to 250 MHz, Figures 190-26 and 190-27 only plot the curves up to 200 MHz. Should be adapted to match the frequency range provided in the equations.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.5.3** *P* **127** *L* **29** # 45

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

100BASE-T1L only supports link segments and no mixing segments. Thus, "Link or Mixing Segment" should be changed to "Link Segment" in Figure 190-28.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.5.3** *P* **127** *L* **44** # 46

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Should be -113 dBm/Hz instead of -11 dBm/Hz.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED Align with resolution to comment 161.

Cl **190** *SC* **190.7.1.2** *P* **131** *L* **8** # 47

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The decision has been made to start the link segment definition from 1 MHz instead of 0.1 MHz. In This case the roll-off of the RL between 0.1 MHz and 0.5 MHz is no more present.

SuggestedRemedy

Remove line with "9 + 8f" and start the 13 dB section at 1 MHz instead of 0.5 MHz.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.7.1.2** *P* **132** *L* **12** # 48

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"1 <= f <= 5" needs to be changed to "1 <= f < 5" as otherwise it overlaps withe the second frequency range specified below.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.7.2.1** *P* **134** *L* **33** # 49

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"10 <= f < 60" needs to be changed to "10 <= f <= 60" (the 60 MHz as upper frequency for the link segment definition should be included). See also page 136, line 7, where the limits should be changed to "2 <= f <= 60".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.3** *P* **142** *L* **26** # 50

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Powering*

Type H PD or PSE reference is missing.

SuggestedRemedy

Suggest to change: "Clause 104 Type G PD or PSE incorporated in the MDI" to "Clause 104 Type G or Type H PD or PSE incorporated in the MDI"

Response *Response Status* **C**

REVISEDAccomodated by comment 54.

Cl **190** *SC* **190.11.4.2.1** *P* **143** *L* **8** # 51

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Numbering start with PCST3 instead of PCST1.

SuggestedRemedy

Suggest to start with PCST1.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.2** *P* **146** *L* **25** # 52

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Test modes 9 and 10 have the RS-FEC enabled.

SuggestedRemedy

Change "without RS-FEC" to "with RS-FEC" and change "M" to "FEC:M" in the Status column.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.2** *P* **146** *L* **46** # 53

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Should read as "2.0 V +/- 5%" instead of "20 V +/- 5%".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.2** *P* **147** *L* **3** # 54

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Powering*

Type H PSE or PD is missing.

SuggestedRemedy

Change to: "When Clause 104 Type G or Type H PSE or PD PI is included, in test modes 3 and 4 (if increased transmit level is supported), less than 25% droop with respect to the initial value at 37.5 ns after zero crossing at 100 ns after the zero crossing".

Response *Response Status* **C**

REVISEDPage 123 line 49, change: "When a Clause 104 Type G PSE or PD PI is not encompassed within the MDI" to "When a Clause 104 PSE or PD PI is not encompassed within the MDI"Page 124 line 1, change "When a Clause 104 Type G PSE or PD PI is encompassed within the MDI" to "When a Clause 104 PSE or PD PI is encompassed within the MDI"Page 142 line 26 and Page 147 line 3 delete "Type G"

Cl **190** *SC* **190.11.4.3.2** *P* **147** *L* **25** # 55

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Space between "and" and "Equation" needs to be added.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.6** *P* **149** *L* **20** # 56

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

"short circuti" should read as "short circuit".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **98B** *SC* **98B.4** *P* **151** *L* **1** # 57

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Page is empty.

SuggestedRemedy

Remove empty page.

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.1.1** *P* **152** *L* **25** # 58

Graber, Steffen Pepperl+Fuchs SE

Comment Type **T** *Comment Status* **A** *Downshift/Upshift*

Having modes of operation with increased transmit level and standard transmit level in a sequence can lead to issues during downshift. When downshifting from an increased transmit level to a normal transmit level, then likely, the risk for a link failure is even higher in noisy environments. Therefore it could make sense to downshift from 100BASE-T1L increased transmit level directly to 10BASE-T1L increased transmit level and from 100BASE-T1L normal transmit level directly to 10BASE-T1L normal transmit level (as likely most applications outside of intrinsic safety would use the increased transmit level for a better noise immunity).

SuggestedRemedy

Suggest to add a note, that in many configurations it makes sense to only activate the PHYs either supporting increased transmit level or normal transmit level for downshift sequence: "Note - In many applications it is reasonable to limit the downshift/upshift sequence to either the PHYs supporting an increased transmit level or PHYs supporting a normal transmit level, as otherwise a downshift from an increased transmit level to a normal transmit level occurs, which can lead to a higher probability for a link failure in noisy environments.".

Response *Response Status* **C**

REVISEDAt Page 152 Line 31, add: "Note - In many applications it is reasonable to limit the downshift/upshift sequence to either the PHYs supporting an increased transmit level or PHYs supporting a normal transmit level, as otherwise a downshift from an increased transmit level to a normal transmit level occurs, which can lead to a higher probability for a link failure in noisy environments.". At Page 152 Lines 25 to 29, swap the order of the increased transmit level and standard transmit level, and add the words "standard transmit level" for 100BASE-T1L and for 10BASE-T1L. so that the order reads (as a list with em-dashes):100BASE-T1L standard transmit level, 100BASE-T1L increased transmit level, 10BASE-T1L standard transmit level, 10BASE-T1L increased transmit level

Cl **98D** *SC* **98D.2.5** *P* **155** *L* **1** # 59

Graber, Steffen Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The following typos need to be corrected: line 22: "link_statusHCD] <= FAIL" needs to be changed to "link_status[HCD] <= FAIL", line 27: "IF (ds_fail_count >= mr_ds_fail_threshold THEN" needs to be changed to "IF (ds_fail_count >= mr_ds_fail_threshold) THEN", line 43: an "END" is missing one line top of the next "IF". At the points where "++" is used to increment a variable, there should be no space between the variable and the "++".

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.2.5** *P* **155** *L* **21** # 60

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **T** *Comment Status* **A** *Downshift/Upshift*

In state "DS_LINKDOWN" the first two IF instructions just (re)start the ds_upshift_timer. The first IF instruction stops it (if it is running), so that it is definitely stopped afterwards. The next IF instruction is then always true and starts the ds_upshift_timer. If this is the intended behavior, then just a "start ds_upshift_timer" should be enough (nevertheless, this is likely not the intended behavior). What is more likely wanted is to stop the ds_upshift_timer in case a link fails. So likely the right thing to do is to replace the two IF instructions at the beginning of the "DS_LINKDOWN" state with "stop ds_upshift_timer". In this case, the ds_upshift_timer would be started in case of a link up (in "DS_LINKUP" state), which should be the intended behavior, otherwise the timer would be running and after expiring while staying in DS_IDLE state an upshift would be attempted, even if the link is down.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISEDAccomodated by comment 147.

Cl **98D** *SC* **98D.2.6** *P* **156** *L* **17** # 61

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

The restart period is defined in bits 7.531.15:8.

SuggestedRemedy

Change register bits 7.531.0:7 to 7.531.15:8.

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.2.7** *P* **157** *L* **17** # 62

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

Value for 10BASE-T1L (normal transmit level) should be 19 instead of 18.

SuggestedRemedy

Change Value from 18 to 19. Likely also, but not sure, 32:64 in last row needs to be changed to 0:31 (as there are just 5 bis for encoding). 0:15 in first row needs to be "-" (as there are no types within the technology category 0) and the 0:15 from the first row need to be moved to a new third row with "0:15 | Reserved".

Response *Response Status* **C**

REVISEDReplace Table 98D-2 (p 157) with Table 98D-2 in jones_3dg_02_1125.pdf

Cl **98D** *SC* **98D.3.3** *P* **159** *L* **6** # 63

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

Downshift is optional. Thus "*DNSFT" cannot be mandatory and "M" needs to be changed to "O" in status row. The same is the case for tables in Clauses 98D.3.4.1 and 98D.3.4.2 where a "Yes/No" Checkbox for the support is provided, which leads to the assumption that all different features are optional. Thus instead of "DNSFT:M" the status "DNSFT:O" and instead of "UPSFT:M" the status "UPSFT:O" needs to be used.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

REVISEDAdd new sentence to the end of 98D.1"PHYs implementing Annex 98D shall comply with the behavior in Figure 98D-1."Replace 98D.3.3 Major capabilities and options with "98 D.3.3 Support for downshift/upshift"Replace PICS entry *DNSHFT with:DS1Feature: Behavior of downshift/upshiftSubclause: 98D.1Comment: Behavior complies with Figure 98D-1Status: MSupport: Yes[]Delete all other PICS in 98D.3.4

Cl **98D** *SC* **98D.3.4.1** *P* **159** *L* **23** # 64

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *EZ*

Should be "mr_ds_downshift_attempts" instead of "mr_ds_downshift_enabled".

SuggestedRemedy

Change "mr_ds_downshift_enabled" to "mr_ds_downshift_attempts".

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.3.4.2** *P* **159** *L* **39** # 65

Graber, Steffen — Pepperl+Fuchs SE

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

"mr_ds_upshift_supported" does not exist (combined bit for upshift/downshift supported). Thus, "UPSFT1" needs to be removed from the table.

SuggestedRemedy

As per comment.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.7.1.2** *P* **131** *L* **8** # 66

Fischer, Peter SwissBES GmbH

Comment Type **T** *Comment Status* **A** *EZ*

Erro in formula 190-14, the first line is obsolete, the second row has a wrong starting frequency, compare to figure 190-31 and the text above Óat all frequencies from 1 MHZ to 60 MHz.

SuggestedRemedy

Delete the first line of formula 190-14, correct the starting frequency on the second line from 0.5 to 1.

Response *Response Status* **C**

ACCEPTED See comment 47

Cl **30** *SC* **30.5.1.1.4** *P* **25** *L* **41** # 67

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Text "For 10BASE-T1L and 100BASE-T1 Ó " duplicates text starting at line 39.

SuggestedRemedy

Remove duplicate text (Keep text "For 10BASE-T1L and 100BASE-T1 [Ó]". 100BASE-T1L has its own definition following).

Response *Response Status* **C**

REVISEDSee comment 8.

Cl **30** *SC* **30.5.1.1.15** *P* **26** *L* **19** # 68

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **R** *EZ*

Wrong punctuation mark ".;" at the end of the paragraph.
Note: the wrong punctuation is already present in the IEEE Std 802.3-2022, and occurs in some other clauses of the standard and the P802.3dg 2.1 draft.

SuggestedRemedy

Remove ";" following "."

Response *Response Status* **C**

REJECTEDCRG Disagrees with commenter. The ".;" while not correct English is the correct usage in the syntax of Clause 30 management definitions.

Cl **45** *SC* **45.2.1.236b.1** *P* **33** *L* **41** # 69

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

The word "Standard" is missing in the clause heading.

SuggestedRemedy

Insert "Standard" before "transmit/receive"

Response *Response Status* **C**

REVISEDSee comment 12.

Cl **45** *SC* **45.2.1.236b.1** *P* **33** *L* **43** # 70

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Text states that the PHY support "an standard transmit/receive level Ó". The same issue occurs at line 45.

SuggestedRemedy

Change to "an standard" to "a standard" in two places.

Response *Response Status* **C**

REVISEDAccomodated by comment 174.

Cl **45** *SC* **45.2.3.75c** *P* **38** *L* **11** # 71

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Use of all lower-case in "infofield" is not consistent with clause 190.

SuggestedRemedy

Change "infofield" to "InfoField"

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.3.75d.2** *P* **38** *L* **32** # 72

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Spurious text "um TC receive path data delay" and Table 45-302 appears at the end of this sub-clause.

SuggestedRemedy

Remove spurious text and table.

Response *Response Status* **C**

REVISEDSee comment 14.

Cl **45** *SC* **45.2.3.75d** *P* **39** *L* **6** # 73

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Use of all lower-case in "infofield" is not consistent with clause 190.

SuggestedRemedy

Change "infofield" to "InfoField"

Response *Response Status* **C**

REVISEDIt should be at p37, line 16.

Cl **45** *SC* **45.2.7.29** *P* **40** *L* **13** # 74

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *Downshift/Upshift*

The Downshift/upshift nomenclature in register 7.529.15 is ambiguous. It is unclear if both are supported (and hence, when supported both downshift and upshift are mandatory) or only one may be supported. There is a single bit to indicate support, but two separated control register bits (7.528.15 and 7.528.14) to enable downshift and upshift. The definition of those later R/W bits do not indicate what happens when they are written but 7.529.15 is 0 (Downshift/Upshift is not supported). Moreover, Annex 98D.3.4 lists separate PICS items for Downshift supported and Upshift supported, but the register mapping for the later is not defined.

SuggestedRemedy

The definition of the 7.529 and 7.528 needs to be clarified and made consistent with Annex 98D.

Response *Response Status* **C**

REVISEDAccomodated by comments 65 and 151.

Cl **190** *SC* **190.1** *P* **55** *L* **31** # 75

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *RS-FEC*

Add comma after RS-FEC to improve readability of "PHYs implementing RS-FEC request use of the capability by setting MDIO register bit 3.2297.14 to one"

SuggestedRemedy

Change text to "PHYs implementing RS-FEC, request use of the capability by setting MDIO register bit 3.2297.14 to one"

Response *Response Status* **C**

REVISED Accomodated comment 185.

Cl **190** *SC* **190.1.2** *P* **56** *L* **30** # 76

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Mix of singular and plural in text "A 100BASE-T1L PHY are mandated Ó".

SuggestedRemedy

Change text to "100BASE-T1L PHYs are mandated ...".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.2.2** *P* **61** *L* **31** # 77

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Reference to Figure 190-16 should be to Figure 190-2.

SuggestedRemedy

Change reference.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.2** *P* **72** *L* **3** # 78

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *PCS*

There is no "PCS Clock function" listed in clause "190.3 Physical Coding Sublayer (PCS)".

SuggestedRemedy

Clause 190.3.2 should either be renamed or either removed and the requirements to generate the TX_CLK and RX_CLK clocks added under Clauses 190.3.3 and 190.3.4 respectively.
Note that either way, PICS item PCST5 would be affected.

Response *Response Status* **C**

REVISEDDelete 190.3.2 and content.Add new third paragraph on 190.3.3 (before "When communicating with the MII) stating"When the MII is present as an exposed interface, the PCS Transmit function shall generate the TX_CLK in accordance with Clause 22."Add new 2nd paragraph to 190.3.4 stating "When the MII is present as an exposed interface, the PCS Receive function shall generate the RX_CLK in accordance with Clause 22."In 190.11.4.2.1Change PICS PCST5 Feature to "TX_CLK generation", subclause to 190.3.3, Value/Comment, "When the MII is an exposed interface, generate TX_CLK as specified in Clause 22", Status: MII:M Support Yes[] N/A[]In 190.11.4.2.2Add new PICS PCSR2 (and renumber subsequent PCSR PICS), Feature = "RX_CLK generation", subclause 190.3.4, Value/Comment "When the MII is an exposed interface, generate RX_CLK as specified in Clause 22", Status: MII:M Support Yes[] N/A[]

Cl **190** *SC* **190.3.3.2** *P* **73** *L* **29** # 79

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

In the clause heading "8N+1" is written without spaces before and after the + symbol, whereas in most cases there are spaces.

SuggestedRemedy

Globally replace "8N+1" with "8N + 1"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.3.2** *P* **74** *L* **41** # 80

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *Editorial*

May consider to change the symbol labels:
S0, S1, S2, S3, S4, S5, S6 ... S11 Ó S96N-1
to:
A0, B0, C0, D0, E0, F0, A1 Ó F1 Ó F16N-1
To be consistent with the nomenclature in 190.3.3.6.6 and 190.3.5.3

SuggestedRemedy

Rename the symbol labels as suggested. In addition label the last code-group as "6B or 6T symbol 16N-1"

Response *Response Status* **C**

REVISEDRename the symbol labels TA0, TB0, TC0, TD0, TE0, TF0, TA1, àTF1à TF16N - 1; with the numbers as subscript, as in header to Table 190-8.Change NOTE - to NOTE 1 -Add new NOTE 2 (after Note 1):NOTE 2 - See 190.3.3.6.6 and 190.3.5.3 for nomenclature at the PMA service interface.

Cl **190** *SC* **190.3.3.6.2** *P* **82** *L* **45** # 81

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Space missing in the text "... mi,0of the finite field".

SuggestedRemedy

Insert space between "mi,0" and "of Ó".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.3.6.6** *P* **88** *L* **1** # 82

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Text "A balanced code-group is generated Ó" precedes the equation for SXn, but should follow it.

SuggestedRemedy

Move the text to the line after the equation for SXn. It should be before the equation for An, Bn, Ó Fn.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.4** *P* **89** *L* **34** # 83

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *RS-FEC*

The text "The PCS Receive function shall conform to the PCS Receive state diagram in Figure 190ˈ13 and Figure 190ˈ14. When RS-FEC is enabled for the link, the PHY Receive function shall conform to the RFER Monitor state diagram of Figure 190ˈ15." may be misleading. The PCS receive function shall conform to the state diagrams in Figures 190-13 and 190-14 in all cases, and when RS-FEC is enabled for the link, the RFER monitor process, monitors the signal quality.

SuggestedRemedy

Change the text to just:

"The PCS Receive function shall conform to the PCS Receive state diagram in Figure 190ˈ13 and Figure 190ˈ14."

In the last paragraph of 190.3.4 (Page 90, Line 9) change the sentence starting with "When RS-FEC is enabled for the link" as shown:

"When RS-FEC is enabled for the link, the PCS receive shall perform the RS-FEC frame error ratio (RFER) monitor process, as specified in the state diagram of Figure 190-15, to monitor the reliability of the RS-FEC decoder and assert hi_rfer to indicate an excessive RS-FEC frame error ratio".

Response *Response Status* **C**

REVISEDDelete "When RS-FEC is enabled for the link, the PHY Receive function shall conform to the RFER Monitor state diagram of Figure 190û15." (2nd sentence of 1st paragraph of 190.3.4, at P89 L34)In the last paragraph of 190.3.4 (Page 90, Line 9) change the sentence starting with "When RS-FEC is enabled for the link" as shown:"When RS-FEC is enabled for the link, the PCS receive shall perform the RS-FEC frame error ratio (RFER) monitor process, as specified in the state diagram of Figure 190-15, to monitor the reliability of the RS-FEC decoder and assert hi_rfer to indicate an excessive RS-FEC frame error ratio".

Cl **190** *SC* **190.3.5.1** *P* **91** *L* **49** # 84

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *Editorial*

The notation convention used in the definition of Sdn[3], where * is used as a logical AND operator (as in the state diagrams), is inconsistent with the convention used in the definition of SXn in page 88, line 4 and in page 96, line 27, where AND and OR are used.
I understand that the later is to try to avoid confusion with the preceding DSn formulas where '+' is used to denote integer addition. But, there should be no confusion from the context (the Sdn[3] and SXn definitions are combining relational operators, which always produce a Boolean true/false result). In any case, there should be consistency in how operators are used within the same clause.

SuggestedRemedy

Resolve the inconsistencies.

Response *Response Status* **C**

REVISED Replace * with AND on P91 L48

Cl **190** *SC* **190.3.5.2** *P* **92** *L* **14** # 85

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *PCS*

Code-groups are noted as "6-tuple" in Figure 190-7.

SuggestedRemedy

Change "6-tuple" to" code-group" (or "4B6B code-group") in Figure 190-7.

Response *Response Status* **C**

REVISED Change "6-tuple" to "code-group"

Cl **190** *SC* **190.3.5.2** *P* **93** *L* **10** # 86

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Reference to Figure 190-12 should be to Figure 190-10.

SuggestedRemedy

Change reference.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.5.2** *P* **93** *L* **13** # 87

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *EEE*

The text states "When the config parameter is LEADER and EEE is supported, the PHY incorporates a formatted training frame count (FTFC) [Ó]. When the config parameter is FOLLOWER is enabled for the link, the FOLLOWER uses the FTFC value received [Ó]". Which implies that the leader should send the FTFC when 3.2296.15 (EEE ability) is set, regardless of whether 3.2297.15 (EEE advertisement) is set. However, the follower would only use it EEE is *enabled for the link*, which would never happen if 3.2297.14 is not set in the master. This seems a bit inconsistent.

SuggestedRemedy

Change the text for the leader to:
"When the config parameter is LEADER and EEE is advertised, the PHY incorporates a formatted training frame count (FTFC)."

Response *Response Status* **C**

REVISED At P93 L13, change "supported" to "advertised".

Cl **190** *SC* **190.3.5.2.4** *P* **93** *L* **8** # 88

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *PCS*

Same issue as in 190.3.5.2 page 93, line 13.
The text states "When the config parameter is LEADER and EEE is supported", but it should be "and EEE is advertised". Same in line 18.

SuggestedRemedy

Change the text in line 8 to:
"When the config parameter is LEADER and EEE is advertised, Octet 7<7:0> shall be set equal to the value".
Change the text in line 18 to:
"When the config parameter is FOLLOWER or EEE is not advertised, bits Octet 7<7:0> shall be set to zero."

Response *Response Status* **C**

REVISED Text is on page 94 lines 8 and 18.change "supported" to "advertised" (both places).

Cl **190** *SC* **190.3.5.2.4** *P* **94** *L* **39** # 89

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **R** *Editorial*

In the text:
"Bit Oct10<0>, rs_adv, is set to one when the 100BASE-T1L PHY has the ability to operate in RS-FEC mode as indicated by status register bit 3.2296.14 and the 100BASE-T1L training register bit 3.2297.14 to request RS-FEC mode of operation is also set to a one"
The reference to 3.2296.14 is unnecessary, given that 45.2.3.75c (Register 3.2297) states explicitly that "only bits representing supported abilities can be set". Same applies to eee_adv.

SuggestedRemedy

Change the text to:
"Bit Oct10<0>, rs_adv, is set to one when the 100BASE-T1L training register bit 3.2297.14 to request RS-FEC mode of operation is set to a one. Bit Oct10<1>, eee_adv, is set to one when the 100BASE-T1L training register bit 3.2297.15 to request EEE mode of operation is set to a one."
Or
"Bit Oct10<0>, rs_adv, and Oct10<1>, eee_adv, are set to the values in the 100BASE-T1L training register bits 3.2297.14 and 3.2297.15 respectively."

Response *Response Status* **C**

REJECTED CRG Disagrees with the commenter. Text is clear, and provides compete information. Proposal would send the reader looking to the registers for information on what these bits in the infofield mean.

Cl **190** *SC* **190.3.5.3** *P* **96** *L* **26** # 90

Brychta, Michal Analog Devices

Comment Type **TR** *Comment Status* **A** *PCS*

The equation for SXn was correct in draft 2.0 but used * and + for logical operations. The equation should have been changed only by replacing the binary operator * with AND, and the binary operator + with OR. However, the equation has been substantively changed in draft 2.1 and it is now incorrect.

SuggestedRemedy

Replace the equation for SXn with the version from draft 2.0 and then replace any binary operators * with AND, and any binary operators + with OR. Do not change the unary + operator on the +1 value in the equation as this is a standard integer operator.

Response *Response Status* **C**

REVISEDAccomodated by comment 34.

Cl **190** *SC* **190.3.6** *P* **97** *L* **41** # 91

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *LPI*

The first value of mod(PFC,96) in Figure 190-10 is 8, and it should be 0 (for both LEADER and FOLLOWER). Also the grey tones used to represent the sleep, alert and wake cycles is inconsistent between the LEADER and FOLLOWER.

SuggestedRemedy

Change the first value of mod(PFC,96) in Figure 190-10 from "8" to "0" for both the LEADER and FOLLOWER.
Use the same grey tones to represent the sleep, alert and wake cycles in both the LEADER and FOLLOWER.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **10** # 92

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *RS-FEC*

The text "The boolean value of rx_char is extracted from rx_coded<0>, the 8-bit numerical value of rx_char is extracted from rx_coded<8N+1:8N+9>." is incorrect.

SuggestedRemedy

Change the text to:
"For each of the N characters, the Boolean value of rx_char is extracted from rx_coded<0> and the 8-bit numerical value is extracted from rx_coded<8n+1:8n+8>, for n = 0 to N-1."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **23** # 93

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *Editorial*

In the text "the tx_mii array indicate either Normal Inter-Frame or Assert remote fault", Inter-Frame should not be capitalized, since tx_mii refers to the MII transfers, and in Table 22-1 the indication is named "Normal inter-frame"

SuggestedRemedy

Replace "Normal Inter-Frame" with "Normal inter-frame"

Response *Response Status* **C**

REVISEDEditorÆs license to change all ôInter-Frameö to ôinter-frameö and ôNormal inter-frameö to ônormal inter-frameö with editorÆs license except where a title, stand alone item, or subject of a sentence (in which case it is ôNormal inter-frameö).Changes are as follows:p 72 L51, P80 L13 & P80 L24 to ônormal inter-frameö, p77 L38 & p80 L6 to ôNormal inter-frameö, P80 L28, P101 L23, P121 L27, P121 L31, P146 L22, & P146 L25 to ônormal inter-frameö

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **38** # 94

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EEE*

The text "à set by the PCS Receive function à" is incorrect as the variable eee_low_snr is set by the PMA receive function. There may have been confusion due to the fact that the next variable on the list, rem_eee_low_snr, is set by the PCS receive function.

SuggestedRemedy

Change text to "à set by the PMA Receive function à"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **52** # 95

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *LPI*

The text for rx_lpi_sleep "Boolean variable that is set TRUE when the last 32 rx_char values received are /LI/ and EEE is supported and enabled. It is set FALSE otherwise." For consistency with other clauses, it should better say "[Ó] and EEE is enabled for the link" (Which implies it is supported and advertised by both link partners).

SuggestedRemedy

Change the text to:
"Boolean variable that is set TRUE when the last 32 rx_char values received are /LI/ and EEE is enabled for the link. It is set FALSE otherwise."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.3** *P* **103** *L* **12** # 96

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

Ending paragraph period missing for all Duration statements in this clause.

SuggestedRemedy

Add ending periods.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.1** *P* **111** *L* **9** # 97

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *training*

The text states "See 190.3.5 for information about training time. However, in conditions of high noise, more than one attempt may be required to establish a valid link.". The last sentence is out of context and it is included verbatim in the reference (190.3.5).

SuggestedRemedy

Delete the last sentence. "However, in conditions of high noise, more than one attempt may be required to establish a valid link."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.1** *P* **114** *L* **22** # 98

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *Editorial*

The text should refer to the config parameter

SuggestedRemedy

Change the text to:
"Variable set by the PHY Control function and communicated through the config parameter of the PMA_CONFIG.indication primitive. See 190.2.2.1."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.1** *P* **114** *L* **25** # 99

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

The text wrongly refers to the config parameter instead of the link_control parameter

SuggestedRemedy

Change the text to:
"Variable set by the Auto-Negotiation function and communicated through the link_control parameter of the PMA_LINK.request primitive. See 190.2.1.1."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.1** *P* **114** *L* **32** # 100

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *State diagrams*

loc_phy_ready not defined as Boolean. Same applies to ready_to_transmit (page 115, line 4), rx_lpi_active (page 115, line 26), timing_locked (page 115, line 28), tx_info_countdown_done (page 115, line 40), tx_info_frame_end (page 115, line 48) and lpi_refresh_detect (page 116, line 3)

SuggestedRemedy

Replace "Variable" with "Boolean variable" for the mentioned variables.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.1** *P* **114** *L* **52** # 101

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *Editorial*

The text states: "The pma_refresh_status variable is set to OK when LPI is not supported.". Although that is correct, it may be more consistent with other clauses to say that "is set to OK when EEE is not enabled for the link"

SuggestedRemedy

Change the text to:
"The pma_refresh_status variable is set to OK when EEE is not enabled for the link."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.4.9.1.2** *P* **116** *L* **11** # 102

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *State diagrams*

The text states that "All timers operate in the manner described in 14.2.3.2". However, 190.1.5.1 State diagram notation, defined that "State diagram timer follow the conventions of 40.4.5.2". Although there is no difference for Clause 190, since stop timer is not used in any state diagram, the convention for the timers should be unified.

SuggestedRemedy

Delete the text "All timers operate in the manner described in 14.2.3.2".

In addition, and optionally, 14.2.3.2 could be referenced in 190.1.5.1 (page 59, line 9) instead of 40.4.5.2.

Response *Response Status* **C**

REVISED Delete the text "All timers operate in the manner described in 14.2.3.2"

Cl **190** *SC* **190.4.9.2** *P* **117** *L* **45** # 103

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *State diagrams*

The PHY Control state diagram (parts a, b and c) do not use the same labelling conventions in the PCS Receive state diagram (parts a and b), defined in 145.2.5.2.

SuggestedRemedy

The state diagrams in the same clause should be consistent.
Resolve the inconsistencies by either adding the labels as per 145.2.5.2 in the PHY control state diagram, or removing them in the PCS Receive state diagram, and defining a new convention/exception to 145.2.5.2 in 190.1.5.1 (page 59, line 9).

Response *Response Status* **C**

REVISEDAdd label 'pentagon' around exit to INFO_EXCHANGE at P117 L45, and around exit to IDLE_WAIT at P118 L28.Add entry point pentagons to INFO_EXCHANGE and IDLE_WAIT states.

Cl **190** *SC* **190.5.4.4** *P* **124** *L* **30** # 104

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *TX level*

Simulated TX power spectral density (PSD) data indicates that a PSD that is centered between the limit curves has total TX power close to the lower limit currently specified.

SuggestedRemedy

Change "1.0 +/- 1.2 dBm" to "0.0 +/- 1.2 dBm". Also at row 31 change "7.0 +/- 1.2 dBm" to "6.0 +/- 1.2 dBm".

Response *Response Status* **C**

REVISED At P124 L30: Change "1.0 +/- 1.2 dBm" to "0.0 +/- 1.2 dBm". Also at row 31 change "7.0 +/- 1.2 dBm" to "6.0 +/- 1.2 dBm".Also, change P 147 L 15 PICS PMAE18: change feature to: Transmit Power in standard transmit levelchange value to 0.0 +/- 1.2 dBmChange P 147 L 18 PICS PMAE19 value to 6.0 +/- 1.2 dBm

Cl **190** *SC* **190.11.4.2.3** *P* **144** *L* **38** # 105

Brychta, Michal Analog Devices

Comment Type **TR** *Comment Status* **A** *Editorial*

TRNG7 status is !EEE:M arguably should be M

SuggestedRemedy

Change status to M

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.2.4** *P* **145** *L* **13** # 106

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

LPIS3 feature is "Refresh signa" (missing "l")

SuggestedRemedy

Change to "Refresh signal"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.1** *P* **145** *L* **51** # 107

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *State diagrams*

PMAF9 Value/Comment includes Figure 190-20 and 190-21, which do not correspond to the PHY control. There should be separate PICS items for those.

SuggestedRemedy

Add PICS items for Figure 190-20 (Link Monitor) and Figure 190-21 (EEE Refresh Monitor)

Response *Response Status* **C**

REVISED(Requirement needs to be split up)In 190.4.4, P112 L11, replace "PHY Control shall comply with the state diagrams in 190.4.9.2." with "PHY Control shall comply with the state diagrams Figures 190-17, 190-18, and 190-19."Change PICS PMAF9 Value/Comment to "Complies with Figure 190-17, 190-18, and 190-19."In 190.4.5, P113 L8, change "The Link Monitor function behaves as specified by the state diagram of Figure 190û20." to "The Link Monitor function shall comply with the state diagram of Figure 190û20."Add PICS PMAF10 "Link Monitor" , 190.4.5, "Complies with Figure 190-20", M, "Yes[]"In 190.4.6 P113 L22, change," The Refresh monitor behaves as specified by the state diagram of Figure 190û21." to "The Refresh monitor shall comply with the state diagram of Figure 190û21."Add PICS PMAF11 "Refresh Monitor", 190.4.6, "Complies with Figure 190-21", EEE:M, "Yes[] N/A[]"

Cl **190** *SC* **190.11.4.5** *P* **149** *L* **20** # 108

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

MDI5 feature is "Operation after short circuti"

SuggestedRemedy

Change to "Operation after short circuit"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.8** *P* **149** *L* **38** # 109

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *RS-FEC*

ES1 status is M, it should be !FEC:M

SuggestedRemedy

Change Status to !FEC:M

Response *Response Status* **C**

REVISEDChange Feature of ES1 (P149 L38) to Transmit path delay with RS-FEC disabled or not present"Change status of ES1 to "!FEC:M"Change "Item" designator for ES1, ES2, and ES3, from "ES" to "TR".Add "N/A[]" to Support for ES3.

Cl **190** *SC* **190.11.4.8** *P* **149** *L* **43** # 110

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *RS-FEC*

ES3 feature is "Receive path delay with RS-FEC enabled" but it should be "Sum of transmit and received data delays".

SuggestedRemedy

Change feature to "Sum of transmit and receive path delays with RS-FEC enabled for the link"

Response *Response Status* **C**

ACCEPTED

Cl **98B** *SC* **98B.4** *P* **150** *L* **35** # 111

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *EZ*

There is typo ("transit") in the text "100BASE-T1L increased transit/receive level"

SuggestedRemedy

Change the text to: "100BASE-T1L increased transmit/receive level"

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.2.2** *P* **153** *L* **8** # 112

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

mr_ds_downshift_supported is not used anywhere in this Annex, and it is not required. See also comment for 45.2.7.29 (page 40, line 13).

SuggestedRemedy

Remove mr_ds_downshift_supported.

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.2.3** *P* **153** *L* **40** # 113

Brychta, Michal Analog Devices

Comment Type **E** *Comment Status* **A** *State diagrams*

The text states that "All timers operate in the manner described in 14.2.3.2 with the addition that x_timer_running is asserted while a timer is running.". However in 98D.2.1 says that "State diagram timers follow the conventions of 40.4.5.2.". The later is the correct one, since stop is used in the state diagrams and it is not defined in 14.2.3.2. Besides, it is not a good idea to have to different timer conventions defined in the same Annex.

SuggestedRemedy

Remove the paragraph in page 153 line 40.
Change the following sentence in page 152, line 38:
"State diagram timers follow the conventions of 40.4.5.2"
to:
"State diagram timers follow the conventions of 40.4.5.2, with the addition that x_timer_running is asserted while a timer is running."
Note that "while a timer is running" may need a description more consistent with the definitions in 14.2.3.2 (included in 40.4.5.2 by reference).

Response *Response Status* **C**

REVISEDRemove the paragraph at page 153 line 40.Change the following sentence at page 152, line 38: "State diagram timers follow the conventions of 40.4.5.2"to: "State diagram timers follow the conventions of 40.4.5.2, with the addition that x_timer_running is asserted while a timer is running."

Cl **98D** *SC* **98D.2.7** *P* **157** *L* **1** # 114

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *Downshift/Upshift*

The text states that "The enumerations are 8 bits, comprised of a 3 bit technology category (see Table 98B¹1) and a 5 bit type within technology category.". The 5 bit "type" may not enough. The following Table is confusing (wrong?) since it is showing values from 0 to 64, but with just 5 bits, they should be from 0 to 31 (for each category).
If 5 bits are not enough, each of the entries currently defined in registers 7.536 and 7.537 would require more bits. With 15 bits/entry, all possible values would be covered (3-bits/category + 12 technology bits/category)

SuggestedRemedy

Fix/clarify.

Response *Response Status* **C**

REVISEDAccomodated by 62.

Cl **98D** *SC* **98D.3.4.2** *P* **159** *L* **39** # 115

Brychta, Michal Analog Devices

Comment Type **T** *Comment Status* **A** *Downshift/Upshift*

UPSFT1 Feature and Value/Comment are not defined. See also comment for 45.2.7.29 (page 40, line 13).

SuggestedRemedy

Fix (or remove) this item.

Response *Response Status* **C**

REVISEDAccomodated by comment 65.

Cl **190** *SC* **190.2.2** *P* **61** *L* **32** # 116

Opsasnick, Eugene Broadcom

Comment Type **E** *Comment Status* **A** *EZ*

The last cross-reference in the last paragraph on this page is to Figure 190-16, but the text of this paragraph is refering to Figure 190-2. The cross-reference to Fig. 190-16 should be changed to Fig. 190-2 or just removed since the first sentence already has a cross-referemce Fig. 190-2.

SuggestedRemedy

Change the second sentence of the last paragraph on page 61 from:
"Connections from the management interface (signals MDC and MDIO) to the sublayers are pervasive and are not shown in Figure 190¹16."
To either:
"Connections from the management interface (signals MDC and MDIO) to the sublayers are pervasive and are not shown in Figure 190¹2."
Or:
"Connections from the management interface (signals MDC and MDIO) to the sublayers are pervasive and are not shown."

Response *Response Status* **C**

REVISED see comment 77.

Cl **30** *SC* **30.2.2.1** *P* **25** *L* **1** # 117

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

Missing changes to 30.2.2.1, Figure 30¹3 and Table 30¹1e¨Capabilities as shown in jones_3dg_september_2025_02.pdf pages 18 and 19

SuggestedRemedy

Make changes shown in jones_3dg_d2p1_misc_changes_0.pdf pages 3,4

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.6.1.1.5** *P* **26** *L* **43** # 118

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Editorial*

I think that the new entry for 100BASE-T1L2V should be named for increased transmit level rather that the specific voltage since thatãs what we use though much of the document, e.g., Table 45¹198b

SuggestedRemedy

Replace
¶100BASE-T1L2V÷
With
¶100BASE-T1ITL÷

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.6.2.1.2** *P* **27** *L* **19** # 119

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

The Downshift/Upshift control attributes do not follow the style used in 802.3. For example, aAutoNegDownshiftControl should be split into aAutoNegDownshiftControl (attribute) and aAutoNegDownshiftControl (action)

SuggestedRemedy

Make changes shown in jones_3dg_d2p1_misc_changes_0.pdf page(s) 5 ,6,7

Response *Response Status* **C**

REVISEDImplement the changes on jones_3dg_d2p1_misc_changes_3.pdf page(s) 5 ,6, and 7; with the following modifications:change "reports if" to "reports whether" (2 times)change name of aAutoNegDownshiftAdminControl to acAutoNegDownshiftAdminControl (globally)change name of aAutoNegUpshiftAdminControl to acAutoNegUpshiftAdminControl (globally).

Cl **30** *SC* **30.6.2.1.5** *P* **28** *L* **8** # 120

Jones, Peter Cisco

Comment Type **T** *Comment Status* **A** *EZ*

Missing units for aAutoNegDownshiftPeriod

SuggestedRemedy

Replace
¶The period used÷
With
¶The period in seconds used÷

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.6.2.1.6** *P* **28** *L* **18** # 121

Jones, Peter Cisco

Comment Type **T** *Comment Status* **A** *EZ*

Missing units for aAutoNegDownshiftRestartPeriod

SuggestedRemedy

Replace
¶The period used÷
With
¶The period in seconds used÷

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.6.2.1.7** *P* **28** *L* **28** # 122

Jones, Peter Cisco

Comment Type **T** *Comment Status* **A** *EZ*

Missing units for aAutoNegUpshiftPeriod

SuggestedRemedy

Replace
¶The period used÷
With
¶The period in seconds used÷

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.6.3.1.1** *P* **29** *L* **29** # 123

Jones, Peter Cisco

Comment Type **ER** *Comment Status* **A** *EZ*

Cross reference is wrong

SuggestedRemedy

Replace
¶100BASE-T1L (Clause 146)÷
With
¶100BASE-T1L (Clause 190)÷

Response *Response Status* **C**

ACCEPTED

Cl **45** SC **45.2.1.236b.1** P **33** L **41** # 124

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *EZ*

Capitalization

SuggestedRemedy

Replace
¶transmit/receive level ability÷
With
¶Transmit/receive level ability÷

Response *Response Status* **C**

REVISEDSee comment 12.

Cl **45** SC **45.2.7.29** P **40** L **13** # 125

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

The Downshift/Upshift control attributes do not follow the style used in 802.3. For example, aAutoNegDownshiftControl should be split into aAutoNegDownshiftControl (attribute) and aAutoNegDownshiftControl (action)

SuggestedRemedy

Make changes shown in jones_3dg_d2p1_misc_changes.pdf page(s) 7

Response *Response Status* **C**

REVISEDAccomodated by comment 119

Cl **45** SC **45.2.7.29.1** P **40** L **21** # 126

Jones, Peter Cisco

Comment Type **ER** *Comment Status* **A** *EZ*

The title of 45.2.7.29.1 is wrong

SuggestedRemedy

Replace
¶Downshift enabled (7.529.15)÷
With
¶Downshift/Upshift Supported(7.529.15)÷

Response *Response Status* **C**

ACCEPTED

Cl **45** SC **45.2.7.30** P **40** L **37** # 127

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *EZ*

Typo, missing ¶the÷.

SuggestedRemedy

Replace
¶The number of link failures used when evaluating downshift trigger÷
With
¶The number of link failures used when evaluating the downshift trigger÷

Response *Response Status* **C**

REVISEDSee comment 16.

Cl **45** SC **45.2.7.33** P **42** L **11** # 128

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

Missing ¶since Auto-Negotiation was enabled÷

SuggestedRemedy

Replace
¶The number of downshift attempts on the interface÷
With
¶¶The number of downshift attempts on the interface since Auto-Negotiation was enabled÷

Response *Response Status* **C**

ACCEPTED

Cl **45** SC **45.2.7.34** P **42** L **31** # 129

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

Missing ¶since Auto-Negotiation was enabled÷

SuggestedRemedy

Replace
¶The number of downshift restarts on the interface÷
With
¶¶The number of downshift restarts on the interface since Auto-Negotiation was enabled÷

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.7.35** *P* **43** *L* **11** # 130

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Downshift/Upshift*

Improve language

SuggestedRemedy

Replace
¶The number of Upshift attempts since Auto-Negotiation was enabled on the interface÷
With
¶¶The number of Upshift attempts on the interface since Auto-Negotiation was enabled÷

Response *Response Status* **C**

ACCEPTED

Cl **98** *SC* **98.2.1** *P* **47** *L* **10** # 131

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Editorial*

This paragraph is very hard to read.

SuggestedRemedy

Make changes shown in jones_3dg_d2p1_misc_ changes_0.pdf page(s) 10

Response *Response Status* **C**

REVISEDChange editing instruction at page 47 line 8 from: "Change the last paragraph of 98.2.1 as shown: " to "Change the last paragraph of 98.2.1 as shown (including inserting carraige returns after "full reach capability." and after "HSM."):Break paragraph at page 47 into 3 paragraphs by inserting carraige returns after "full reach capability." at line 14 and after "HSM." at line 16.

Cl **104** *SC* **104.1.3** *P* **49** *L* **10** # 132

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Powering*

The paragraph starting with 104.1.3 is almost unreadable

SuggestedRemedy

Make changes shown in jones_3dg_d2p1_misc_changes_0.pdf page(s) 9

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.1** *P* **55** *L* **10** # 133

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *EZ*

Improve text clarity.

SuggestedRemedy

Replace
¶This clause defines the type 100BASE-T1L Physical Coding Sublayer (PCS) and type 100BASE-T1L Physical Medium Attachment (PMA) sublayer.÷
with
¶This clause defines the 100BASE-T1L Physical Coding Sublayer (PCS) and the 100BASE-T1L Physical Medium Attachment (PMA) sublayer.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.1** *P* **55** *L* **15** # 134

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Editorial*

Why do we need to say that 100BASE-T1L is ¶one of the 100 Mb/s Ethernet family of full-duplex PHY specifications÷?

SuggestedRemedy

Replace
¶The 100BASE-T1L PHY is one of the 100 Mb/s Ethernet family of full-duplex PHY specifications, capable of operating at 100 Mb/s.÷
with
¶The 100BASE -T1L PHY is a full-duplex PHY specification, capable of operating at 100 Mb/s.

Response *Response Status* **C**

ACCEPTED TFTD. The issue is whether 100BASE-T1L is a "member of the 100BASE-T family" which is in clause 21, or not. It doesn't use clause 28 autoneg. It does use MII, and is 100 Mb/s, but is otherwise different.

Cl **190** *SC* **190.1** *P* **55** *L* **28** # 135

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *RS-FEC*

Simplify text so itās like EEE and doesnāt overlap with whatās in 190.1.2

SuggestedRemedy

Replace the 4th paragraph of 190.1 which starts with ¶This clause specifies an optional Reed-Solomon÷ with
¶This clause specifies an optional Reed-Solomon forward error correction (RS-FEC) capability(190.1.2, 190.3.3, 190.3.4). When this capability is active, the PHY adds RS-FEC parity bits to the transmitted data to offer enhanced burst noise protection with increased latency.÷

Response *Response Status* **C**

REVISED Accomodated by comment 185.

Cl **190** *SC* **190.1.2** *P* **56** *L* **24** # 136

Jones, Peter Cisco

Comment Type **E** *Comment Status* **R** *Editorial*

Improve text clarity.

SuggestedRemedy

Replace
¶Auto-Negotiation, as specified in Clause 98, is supported and mandated by 100BASE-T1L devices. Auto-Negotiation is used to advertise capabilities to the link partner, to detect the capabilities advertised by the link partner, to determine common capabilities, and to configure for normal operation. Auto-Negotiation is used to configure the 100BASE-T1L PHY as LEADER or as FOLLOWER and to configure the 100BASE-T1L PHY transmit voltage level.÷
with
¶Auto-Negotiation, as specified in Clause 98, is required for 100BASE-T1L devices. Auto-Negotiation is used to advertise capabilities to the link partner, detect the capabilities advertised by the link partner, determine common capabilities, and configure PHY parameters (e.g., LEADER/FOLLOWER, transmit voltage level)÷

Response *Response Status* **C**

REJECTED CRG Disagrees with commenter. The text was clear and unchanged from D2.0. The proposed modification does not resolve any identified ambiguities.

Cl **190** *SC* **190.1.2** *P* **56** *L* **40** # 137

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *RS-FEC*

Improve text clarity.

SuggestedRemedy

Replace
¶When RS-FEC is enabled, the two PHYs sharing a link segment add RS-FEC parity octets to each transmitted PCS frame to offer enhanced burst noise protection. RS-FEC results in a significant increase in latency.÷
with
¶When RS-FEC is enabled, the two PHYs sharing a link segment add RS-FEC parity octets to each transmitted PCS frame. This provides enhanced burst noise protection but results in a significant increase in latency.÷

Response *Response Status* **C**

REVISED Accomodated by comment 186.

Cl **190** *SC* **190.1.2.3** *P* **58** *L* **12** # 138

Jones, Peter Cisco

Comment Type **E** *Comment Status* **R** *Editorial*

Improve text clarity.

SuggestedRemedy

Replace
¶A 100BASE-T1L PHY optionally supports the EEE capability, as described in 78.3. The EEE capability is a mechanism by which a 100BASE-T1L PHY adapts signaling during periods of low link utilization to provide opportunities for reduced power consumption. A PHY can enter the LPI mode of operation after completing training. Each direction of the full duplex link is able to enter and exit the LPI mode independently, supporting symmetric and asymmetric LPI operation. This allows power savings when only one side of the full duplex link is in a period of low utilization. The transition to or from LPI mode is not expected to cause any MAC frames to be lost or corrupted. Support for the EEE capabilities is advertised in the InfoField during link startup (see 190.3.5.2.4). Transitions to and from the LPI transmit mode are controlled via MII signaling. Transitions to and from the LPI receive mode are controlled by the link partner using sleep and wake signaling.÷
with
¶A 100BASE-T1L PHY may optionally support the EEE capability (78.3). This is mechanism by which a PHY adapts signaling during periods of low link utilization to provide reduced power consumption. A PHY can enter the LPI mode of operation after completing training. Each direction of the full duplex link can enter and exit the LPI mode independently, supporting symmetric and asymmetric LPI operation. Asymmetric LPI operation allows power savings when only one side of the full duplex link is in a period of low utilization.
The transition to or from LPI mode is not expected to cause any MAC frames to be lost or corrupted. Support for EEE is advertised in the InfoField during link startup (see 190.3.5.2.4). Transitions to and from transmit LPI operation are controlled via MII signaling. Transitions to and from receive LPI operation are controlled by the link partner using sleep and wake signaling.÷

Response *Response Status* **C**

REJECTED CRG disagrees with commenter. Rewrite simplifies text but actually loses key points that have been worked out through previous ballot cycles, introduces "may" (is permitted to), which isn't quite what is meant by the 'optionally supports', and creates new problems for the ballot to resolve.

Cl **190** *SC* **190.3** *P* **71** *L* **5** # 139

Jones, Peter Cisco

Comment Type **E** *Comment Status* **R** *Editorial*

Improve text consistency.

SuggestedRemedy

Replace
¶The PCS sublayer comprises one PCS Reset function and two simultaneous and asynchronous operating functions. ¶
with
¶The PCS sublayer comprises a reset function and two simultaneous and asynchronous operating functions.÷

Response *Response Status* **C**

REJECTED CRG Disagrees with commenter. Text is unchanged from prior draft and is consistent with other clauses.

Cl **190** *SC* **190.4** *P* **110** *L* **7** # 140

Jones, Peter Cisco

Comment Type **E** *Comment Status* **R** *Editorial*

Improve text consistency.

SuggestedRemedy

Replace
¶The PMA sublayer comprises one PMA Reset function and five simultaneous and asynchronous operating functions.÷
with
¶The PMA sublayer comprises a reset function and five simultaneous and asynchronous operating functions.÷

Response *Response Status* **C**

REJECTED CRG disagrees with the commenter. Text is clear and unchanged from prior ballot stage.

Cl **190** *SC* **190.6.1** *P* **128** *L* **32** # 141

Jones, Peter Cisco

Comment Type **T** *Comment Status* **A** *Editorial*

Add Auto-Negotiation speed selection to the list.

SuggestedRemedy

insert the following text after item a) in the list
a1) Selecting the Auto-Negotiation speed mode (LSM vs HSM) .

Response *Response Status* **C**

REVISED Insert new item b) and re-number remaining items: "Selecting the Auto-Negotiation speed mode (LSM vs HSM).

Cl **98D** *SC* **98D.1** *P* **152** *L* **16** # 142

Jones, Peter Cisco

Comment Type **E** *Comment Status* **R** *Editorial*

Improve language

SuggestedRemedy

Replace
¶Downshift/upshift uses an independent downshift/upshift sequence to that defined in 98B.4.÷
With
¶Downshift/upshift uses an independent downshift/upshift sequence to the sequence defined in 98B.4.÷

Response *Response Status* **C**

REJECTEDCRG disagrees with the commenter. Text is clear. No ambiguity is resolved by the proposed wording change.

Cl **98D** *SC* **98D.1** *P* **152** *L* **16** # 143

Jones, Peter Cisco

Comment Type **ER** *Comment Status* **A** *Downshift/Upshift*

Improve text clarity.

SuggestedRemedy

Replace
¶Downshift/Upshift uses independent PHY prioritization for Downshift/Upshift to that defined in 98B.4. The 98B.4 list would include transitions that donãt make sense (e.g., 100BASE-T1 to 10BASE-T1S)÷
With
¶Downshift/Upshift uses independent link setting prioritization (e.g., PHY type, Increased Transmit Level) to that defined in 98B.4. 98B.4 specifies the priority ordering for auto-negotiation. This priority ordering is not applicable to Downshift/Upshift for several reasons including:
1)It includes transitions that donãt make sense (e.g., 5GBASE-T1 to 10BASE-T1S).
2)There may be other attributes we want to consider when defining the Downshift/Upshift link setting sequence in the future, e.g., RS-FEC

Response *Response Status* **C**

REVISED(reworded to remove future-looking statement of intent)Replace "Downshift/Upshift uses an independent PHY prioritization for Downshift/Upshift to that defined in 98B.4. The 98B.4 list would include transitions that don't make sense (e.g., 100BASE-T1 to 10BASE-T1S)"with"Downshift/Upshift uses independent link setting prioritization (e.g., PHY type or Increased Transmit Level) to that defined in 98B.4. 98B.4 specifies the priority ordering for auto-negotiation. This priority ordering is not applicable to Downshift/Upshift for several reasons including that it includes transitions that don't make sense (e.g., transitioning from 5GBASE-T1 to 10BASE-T1S). Having separate orderings allows additional factors to be considered for Downshift/Upshift sequences as the standard evolves."

Cl **98D** *SC* **98D.2.2** *P* **153** *L* **9** # 144

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

The variable ¶mr_ds_downshift_enabled÷ needs to be renamed as it now indicates support for both downshift and upshift

SuggestedRemedy

Replace
mr_ds_downshift_supported
With
mr_ds _supported
Make some change throughout document including at least the following page/line numbers:
156/13, 159/18

Response *Response Status* **C**

REVISEDChange mr_ds_downshift_supported to mr_ds_supported at P156 L13, and P159 L18 (and P153 L8 if not deleted by comment 112)

Cl **98D** *SC* **98D.2.3** *P* **153** *L* **40** # 145

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *State diagrams*

The first paragraph of 98D.2.3 does not include the following bullet that was in jones_3dg_september_2025_02.pdf referred to in the resolution of D2.9 comment #255:
¶A timer is reset and stops counting upon entering a state where ¶stop timer÷ is asserted. ¶
Clause 14 does not use a ¶stop x_timer÷ function.

SuggestedRemedy

Add the bullet text back into the paragraph.

Response *Response Status* **C**

REVISEDAccomodated by comment 102 and 113.

Cl **98D** *SC* **98D.2.5** *P* **155** *L* **1** # 146

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

Figure 98D¹1¨Downshift state diagram has a basic flaw (which was in my contributions to D2.0). The state diagram continuously transitions.

SuggestedRemedy

Adopt the following changes shown in jones_3dg_downshift fix 101525.pdf:
1 ¹ add the following variables to 98D.2.2 as shown on page 2: link_status_change, restart_timer_change, transmit_disable_change, upshift_timer_change.
2 ¹ replace Figure 98D¹1¨Downshift state diagram with that shown in page 3.

Response *Response Status* **C**

REVISED add the following variables to 98D.2.2 as shown on page 2:link_status_ok_transition, restart_timer_done_transition, transmit_disable_true_transition, upshift_timer_done_transitionMake the following changes to Figure 98Dû1ùDownshift state diagram (see page 3 of jones_3dg_downshift fix 101525.pdf for guidance):on transition from DS_IDLE to DS_LINK_DOWN change transmit_disable to transmit_disable_true_transitionon transition from DS_IDLE to DS_LINK_UP change link_status[HCD]=OK to link_status_ok_transitionon transition from DS_IDLE to DS_UPSHIFT change ds_upshift_timer_done to upshift_timer_done_transitionon transition from DS_IDLE to DS_RESTART change (in conditional expression) ds_restart_timer_done to restart_timer_done_transition

Cl **98D** *SC* **98D.2.5** *P* **155** *L* **23** # 147

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

DS_LINKDOWN logic line 4 & 5 refer to ds_upshift_timer instead of ds_restart_timer. See jones_3dg_september_2025_02.pdf page 10

SuggestedRemedy

Change DS_LINKDOWN logic lines 4 & 5 from
IF (!ds_upshift_timer_running) THEN
start ds_upshift timer
to
IF (!ds_restart_timer_running) THEN
start ds_restart_timer

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.2.6** *P* **156** *L* **8** # 148

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

The Downshift/Upshift control attributes do not follow the style used in 802.3. For example, aAutoNegDownshiftControl should be split into aAutoNegDownshiftControl (attribute) and aAutoNegDownshiftControl (action)

SuggestedRemedy

Make changes shown in jones_3dg_d2p1_misc_changes_0.pdf page(s) 8

Response *Response Status* **C**

REVISEDAt P156 L10, (row mr_downshift_enabled), add to the description, (in the same row, but on a new line) "7.529.14 downshift status"At P156 L10, (row mr_upshift_enabled), add to the description, (in the same row, but on a new line) "7.529.13 upshift status"

Cl **98D** *SC* **98D.2.6** *P* **156** *L* **17** # 149

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *EZ*

Typo in bit numbering for mr_ds_period_restart

SuggestedRemedy

Replace
¶7.531.0:7÷
With
¶7.531.7:0÷

Response *Response Status* **C**

REVISEDAccomadated by comment 61.

Cl **98D** *SC* **98D.2.8** *P* **157** *L* **19** # 150

Jones, Peter Cisco

Comment Type **E** *Comment Status* **A** *Editorial*

The description for values 20:31 should be Reserved

SuggestedRemedy

Replace
"Increased transmit level"
"Reserved"

Response *Response Status* **C**

ACCEPTED

Cl **98D** *SC* **98D.3.4.1** *P* **159** *L* **19** # 151

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *Downshift/Upshift*

There is a single ¶supported÷ variable for both downshift and upshift.

SuggestedRemedy

Replace
¶Downshift supported÷
With
¶Downshift/Upshift supported÷

Response *Response Status* **C**

REVISEDDelete PICS item DNSFT1 and renumber.

Cl **98D** *SC* **98D.3.4.1** *P* **159** *L* **23** # 152

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **A** *EZ*

The ôValue/Commentö for DNSFT3 Downshift attempts should be mr_ds_downshift_attempts

SuggestedRemedy

Replace
ômr_ds_downshift_enabledö
With
ômr_ds_downshift_attemptsö

Response *Response Status* **C**

ACCEPTED Accomodated by comment 64.

Cl **98D** *SC* **98D.3.4.2** *P* **159** *L* **39** # 153

Jones, Peter Cisco

Comment Type **TR** *Comment Status* **R** *Downshift/Upshift*

There is a single ¶supported÷ variable for both downshift and upshift, so ¶UPSFT1 Upshift supported÷ is not required.

SuggestedRemedy

Remove UPSFT1 row and renumber

Response *Response Status* **Z**

REJECTED

This comment was WITHDRAWN by the commenter.

Cl **190** *SC* **190.5.2** *P* **120** *L* **48** # 154

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **E** *Comment Status* **A** *TX level*

The nomenclature on transmit modes is mixed. Here we call the transmit modes "1.0 Vpp transmit level" and "2.0 Vpp transmit level" - elsewhere they are referred to as standard transmit level and increased transmit level

SuggestedRemedy

Suggest substitute "increased transmit level" for "2.0 Vpp transmit level" globally, and "standard transmit level" for "1.0 Vpp transmit level" globally.
See file zimmerman_3dg_01_txlev_10202025.pdf for references.

Response *Response Status* **C**

REVISED Incorporate changes listed in zimmerman_3dg_01_txlev_10202025.pdf to change 1.0 Vpp transmit level to "standard transmit level" and 2.0 Vpp transit level to "increased transmit level" with editorial license to fix any that are missed.

Cl **190** *SC* **190.11.4.3.2** *P* **146** *L* **45** # 155

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **E** *Comment Status* **A** *EZ*

Typo. 20 V should be 2.0 V

SuggestedRemedy

change 20 V to 2.0 V

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.7.2** *P* **134** *L* **5** # 156

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **E** *Comment Status* **A** *Link Segment*

MDANEXT and MDAFEXT aren't specified, PSANEXT and PSAACRF areÓ while related, the text in 190.7.2 editorially doesn't really say what we do. There also isn't a lot of value in repeating the detail of the specification that comes in the subsequent sections.

SuggestedRemedy

replace "multiple disturber alien near-end crosstalk (MDANEXT) loss and multiple disturber alien far-end crosstalk (MDAFEXT) are specified." with "alien crosstalk losses from multiple disturbing sources are specified according to their power sums."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.7.2.1** *P* **134** *L* **20** # 157

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **E** *Comment Status* **A** *Link Segment*

there is no reason for the subscript "N" for the disturbed link segment, as there is only one. It also adds confusion because "N" is a parameter in the equation for the PSANEXT limit.

SuggestedRemedy

delete the subscript "N" in equation 190-17, for PSANEXT_N(f) and AN(f)_{j,N}
also delete the subscript "N" on AN(f)_{j,N} in line 23, and
change "segment N." to "segment." at the end of the sentence (P134 L25)

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.7.2.2** *P* **135** *L* **25** # 158

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **T** *Comment Status* **A** *Link Segment*

The text says pair-to-pair alien fext (AFEXT) is specified, but what is actually specified is the PSAACRF.

SuggestedRemedy

Replace "In order to limit the alien crosstalk at the far-end of a 100BASE-T1L link segment, the differential pair-to-pair alien far-end crosstalk (FEXT) loss between the disturbed 100BASE-T1L link segment and other disturbing 100BASE-T1L link segments is specified to meet the bit error ratio objective. To ensure that the total alien FEXT coupled into a 100BASE-T1L link segment is limited, multiple disturber AFEXT is specified as the power sum of the individual alien FEXT disturbers." with
"In order to limit the alien crosstalk at the far-end of a 100BASE-T1L link segment, the differential pair-to-pair alien far-end crosstalk (FEXT) loss between the disturbed 100BASE-T1L link segment and other disturbing 100BASE-T1L link segments is specified to meet the bit error ratio objective. To ensure that the total alien FEXT coupled into a 100BASE-T1L link segment is limited, the crosstalk loss is specified as the power sum of the ratio of the crosstalk losses to the insertion loss of the disturbed link segment (PSAACRF) for the individual disturbers."

Response *Response Status* **C**

REVISEDMake changes shown in slide 4 of
https://www.ieee802.org/3/dg/public/May_2025/Maguire_Comments158and159_dg_01_11252025.pdf

Cl **190** *SC* **190.7.2.2** *P* **135** *L* **37** # 159

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **E** *Comment Status* **A** *Link Segment*

there is no reason for the subscript "N" for the disturbed link segment, as there is only one. It also adds confusion because "N" is a parameter in the equation for the PSAACRF limit.

SuggestedRemedy

delete the subscript "N" in equation 190-19, for PSAACRF_N(f) and AACRF(f)_{j,N}
also delete the subscript "N" on AACRF(f)_{j,N} in line 40, and
change "segment N." to "segment." at the end of the sentence (P135 L42)

Response *Response Status* **C**

REVISEDAccomodated by comment 158.

Cl **190** *SC* **190.8..2.1** *P* **137** *L* **14** # 160

Zimmerman, George CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **T** *Comment Status* **A** *Link Segment*

It is clear that the return loss specification here applies only for MDIs that are not also clause 104 PIs. The text should say that. In the absence of additional work, the suggested RL limit for a powered system given on slide 5 of graber_3dg_01_09092025.pdf will suffice.

SuggestedRemedy

Add "For MDIs that are not also Clause 104 PIs," to the beginning of the first sentence of 190.8.2.1 (and change the sentence start, "The", into lower case "the")
Add new paragraph after Figure 190-36 at the end of 190.8.2.1:
"For MDIs that are also Clause 104 PIs, the differential impedance at the MDI for each transmit/receive channel shall be such that any reflection (due to differential signals incident upon the MDI with a test port having a differential impedance of 100 ?) is attenuated relative to the incident signal per Equation (190'22)."
insert new equation 190-22, from slide 5 of graber_3dg_01_09092025.pdf, and then Equation (190-22) is plotted in Figure 190-3, which is provided for information only.
insert plot of equation 190-22, with caption, "Figure 190-37-Return loss calculated using Equation (190-22)"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.5.3** *P* **127** *L* **22** # 161

Zimmerman, George — CME Consulting/ADI,APLgp,CSCO,Infineon,Onsmi,S

Comment Type **TR** *Comment Status* **A** *TX level*

The -113 dBm/Hz alien crosstalk level was calculated at an early stage without a finalized PSD model. It also doesn't include the standard (1Vpp) transmitter level. Refinements show that in the limiting case of mixed 10BASE-T1L and 100BASE-T1L crosstalk, the level should be -115 dBm/Hz (increased transmit levels) or -121 dBm/Hz. If only 100BASE-T1L crosstalk is considered, the levels should be -120 and -126 dBm/Hz.

SuggestedRemedy

Replace: "The test is performed with a noise source such that noise with a Gaussian distribution, bandwidth of 100 MHz, and magnitude of ¹113 dBm/Hz is present at the MDI. The receive DUT is connected to this noise source through a resistive network, as shown in Figure 190¹28, with a link segment as defined in 190.7."
with "The test is performed with a noise source such that the noise with a Gaussian distribution, bandwidth of 100 MHz, flat within +/- 2dB is present at the MDI. The magnitude of the noise source and the link segment used are shown in Table 190-xx. The receive DUT is connected to this noise source through a resistive network, as shown in Figure 190¹28."
Insert Table 190-xx with the following:
Transmit Level | Link Segment insertion loss | Nominal noise PSD level
Standard | Equation 190-13 | -121 dBm/Hz
Increased | Equation 190-12 | -115 dBm/Hz

Response *Response Status* **C**

REVISED Replace: "The test is performed with a noise source such that noise with a Gaussian distribution, bandwidth of 100 MHz, and magnitude of û113 dBm/Hz is present at the MDI. The receive DUT is connected to this noise source through a resistive network, as shown in Figure 190û28, with a link segment as defined in 190.7."with "The test is performed with a noise source such that the noise with a Gaussian distribution, bandwidth of 100 MHz, flat within +/- 2dB is present at the MDI. The magnitude of the noise source and the link segment used are shown in Table 190-xx. The receive DUT is connected to this noise source through a resistive network, as shown in Figure 190û28."Insert Table 190-xx with the following:Transmit Level | Link Segment insertion loss | Nominal noise PSD levelStandard | Equation 190-13 | -122 dBm/HzIncreased | Equation 190-12 | -116 dBm/Hz

Cl **30** *SC* **30.6.2.1.3** *P* **27** *L* **35** # 162

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegUpshiftControl needs a reference for consistency.

SuggestedRemedy

Change: "This action is used to enable or disable upshift.;"
To: "This action is used to enable or disable upshift (see 45.2.7.28.2).;

Response *Response Status* **C**

REVISEDAccomodated by comment 119

Cl **30** *SC* **30.6.2.1.3** *P* **27** *L* **32** # 163

Brandt, David — Rockwell Automation

Comment Type **T** *Comment Status* **A** *EZ*

Incorrect aAutoNegUpshiftControl type.

SuggestedRemedy

Change "INTEGER" to "BOOLEAN"

Response *Response Status* **C**

ACCEPTED

Cl **30** *SC* **30.6.2.1.4** *P* **27** *L* **45** # 164

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegDownshiftThreshold needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.30.2)" before ".;"

Response *Response Status* **C**

REVISEDinsert "(see 98D.2.6 mr_downshift_threshold)" at the end of the first sentence of "BEHAVIOUR DEFINED AS:" in 30.6.2.1.4 (P27 L44) so that it reads: The number of link failures within the trigger period that will trigger downshift(see 98D.2.6 mr_downshift_threshold).

Cl **30** *SC* **30.6.2.1.5** *P* **28** *L* **9** # 165

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegDownshiftPeriod needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.30.1)" before ".;"

Response *Response Status* **C**

REVISEDChange first sentence of BEHAVIOUR DEFINED AS: for aAutoNegDownshiftPeriod to read:The period in seconds used to evaluate the number of link failures to trigger downshift(see 98D.2.6 mr_period_downshift).

Cl **30** *SC* **30.6.2.1.6** *P* **28** *L* **19** # 166

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegDownshiftRestartPeriod needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.31.1)" before ".;"

Response *Response Status* **C**

REVISEDChange first sentence of BEHAVIOUR DEFINED AS: for aAutoNegDownshiftRestartPeriod to read:The period in seconds used to evaluate restarting the downshift/upshift process (see 98D.2.6 mr_period_restart).

Cl **30** *SC* **30.6.2.1.7** *P* **28** *L* **29** # 167

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegUpshiftPeriod needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.32.1)" before ".;"

Response *Response Status* **C**

REVISEDChange first sentence of BEHAVIOUR DEFINED AS for aAutoNegUpshiftPeriod to read:The period in seconds used to evaluate the number of link failures to trigger upshift(see 98D.2.6 mr_period_upshift).

Cl **30** *SC* **30.6.2.1.8** *P* **28** *L* **38** # 168

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegDownshiftAttempts needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.33.1)" before ".;"

Response *Response Status* **C**

REVISEDChange BEHAVIOUR DEFINED AS for aAutoNegDownshiftAttempts to read:The number of downshift attempts on the interface(see 98D.2.6 mr_downshift_attempts).;

Cl **30** *SC* **30.6.2.1.9** *P* **28** *L* **47** # 169

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegDownshiftRestarts needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.34.1)" before ".;"

Response *Response Status* **C**

REVISEDChange BEHAVIOUR DEFINED AS for aAutoNegDownshiftRestarts to read:The number of downshift/upshift restarts on the interface since autonegotiaon was enabled (see 98D.2.6 mr_downshift_upshift_restarts).;

Cl **30** *SC* **30.6.2.1.10** *P* **29** *L* **8** # 170

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *Management*

Behaviour of aAutoNegUpshiftAttempts needs a reference for consistency.

SuggestedRemedy

Add "(see 45.2.7.35.1)" before ".;"

Response *Response Status* **C**

REVISEDChange BEHAVIOUR DEFINED AS for aAutoNegUpshiftAttempts to read:The number of upshift attempts on the interface since Auto-Negotiation was enabled (see 98D.2.6 mr_downshift_upshift_attempts).;

Cl **45** *SC* **45.2.1.236a.2** *P* **32** *L* **46** # 171

Brandt, David — Rockwell Automation

Comment Type **T** *Comment Status* **A** *Management*

Transmit disable does not have a default.

SuggestedRemedy

Add to end of paragraph: "The default value of bit 1.2300.14 is zero."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.2** *P* **146** *L* **46** # 172

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **A** *EZ*

Voltage 20 V should be 2.0 V.

SuggestedRemedy

Change "20 V" to "2.0 V"

Response *Response Status* **C**

ACCEPTED

Cl **45** *SC* **45.2.1.236b.1** *P* **33** *L* **41** # 173

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **A** *EZ*

Title is incomplete.

SuggestedRemedy

Change "transmit/receive" to "Standard transmit/receive"

Response *Response Status* **C**

REVISEDSee comment 12.

Cl **45** *SC* **45.2.1.236b.1** *P* **33** *L* **43** # 174

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **A** *Editorial*

Grammar issue.

SuggestedRemedy

Change "an standard transmit/receive" to "the standard transmit/receive" in the first and last line of paragraph.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.2** *P* **121** *L* **13** # 175

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **A** *TX level*

Non-symmetrical description with regard to standard and increased transmit levels.

SuggestedRemedy

Add at paragraph start: "If standard transmit level (i.e., 1.0 Vpp mode) is supported, the PHY shall transmit at 1.0 Vpp transmit
level in odd-numbered test modes. If standard transmit level is not supported, odd numbered test modes
are undefined."

Response *Response Status* **C**

REVISEDAdd at paragraph start: "If standard transmit level is supported, the PHY shall transmit at the standard transmit level in odd-numbered test modes. If standard transmit level is not supported, odd numbered test modes are undefined."

Cl **190** *SC* **190.11.3** *P* **142** *L* **21** # 176

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **A** *TX level*

Non-symmetrical options with regard to standard and increased transmit levels.

SuggestedRemedy

Insert "*STL, 1.0 Vpp operating mode", 190.5.4.1, Standard transmit mode, O.1, Yes[] No[]"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.3** *P* **142** *L* **21** # 177

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **A** *TX level*

Non-symmetrical options with regard to standard and increased transmit levels.

SuggestedRemedy

Change Status "O" to "O.1".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.2** *P* **146** *L* **11** # 178

Brandt, David — Rockwell Automation

Comment Type **T** *Comment Status* **A** *TX level*

Non-symmetrical options with regard to standard and increased transmit levels.

SuggestedRemedy

Insert "PMAE2, Odd numbered test modes, 190.5.2, Transmit 1.0 Vpp if standard transmoit level is supported, STL:M, Yes[]", and renumber subsequent PMAE*.

Response *Response Status* **C**

REVISEDInsert new PICS item at "PMAE2, Odd numbered test modes, 190.5.2, Transmit in standard transmit level, if standard transmit level is supported, STL:M, Yes[]", and renumber subsequent PMAE*.

Cl **190** *SC* **190.11.4.3.2** *P* **146** *L* **42** # 179

Brandt, David — Rockwell Automation

Comment Type **T** *Comment Status* **A** *TX level*

Non-symmetrical options with regard to standard and increased transmit levels.

SuggestedRemedy

Change PMAE13 Status from: "!ITL:M" to "STL:M"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.11.4.3.2** *P* **147** *L* **15** # 180

Brandt, David — Rockwell Automation

Comment Type **T** *Comment Status* **A** *TX level*

Non-symmetrical options with regard to standard and increased transmit levels.

SuggestedRemedy

Change PMAE18 Status from: "!ITL:M" to "STL:M" and add to end of Value/Comment "in standard transmit level mode".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.5.4.1** *P* **123** *L* **38** # 181

Brandt, David — Rockwell Automation

Comment Type **E** *Comment Status* **A** *TX level*

Non-symmetrical options with regard to standard and increased transmit levels.

SuggestedRemedy

Change start of paragraph from "If 2.0 Vpp mode is supported, when testedÓ" to "When testedÓ".

Response *Response Status* **C**

REVISEDChange text at P123 L34 (190.5.4.1) as follows:start a new paragraph after "See 190.6.1." (2nd sentence of 190.5.4.1)Change text of the (currently 3rd sentence of 190.5.4.1) to read:If standard transmit level is supported, when tested with the test fixture shown in Figure 190û23 with the transmitter in test mode 1, the transmitter output voltage shall be 1 V ± 5% peak-to-peak.

Cl **190** *SC* **190.5.1** *P* **120** *L* **33** # 182

Potterf, Jason — Cisco

Comment Type **T** *Comment Status* **R** *Link Segment*

Clause 190 has no isolation requirements. Clause 40.6.1.1 Electrical isolation provides precedence and useful language to address this.

SuggestedRemedy

Insert the following text as a new section before Section 190.5.1

190.5.1 Electrical Isolation
A PHY with a MDI that is a PI (see 104.1.2) shall meet the isolation requirements defined in 104.6.1.

A PHY with a MDI that is not a PI shall provide electrical isolation between the port device circuits,
including frame ground (if any) and all MDI leads. This electrical isolation shall meet the isolation
requirements as specified in J.1.2.

Response *Response Status* **Z**

REJECTED

This comment was WITHDRAWN by the commenter.

Cl **190** *SC* **190.3.3.6.2** *P* **82** *L* **44** # 183

Slavick, Jeff Broadcom

Comment Type **TR** *Comment Status* **A** *RS-FEC*

mi,0 is the first bit transmitted from each message symbol. It is not necessarily the first bit transmitted in each codeword.

SuggestedRemedy

Insert "Within each message symbol" ahead of "mi,0 is the first bit transmitted".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.3.6.2** *P* **83** *L* **7** # 184

Slavick, Jeff Broadcom

Comment Type **TR** *Comment Status* **A** *RS-FEC*

pi,0 is the first bit transmitted from each message symbol. It is not the first bit transmitted in each codeword.

SuggestedRemedy

Insert "Within each parity symbol" ahead of "pi,0 is the first bit transmitted".

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.1** *P* **55** *L* # 185

Slavick, Jeff Broadcom

Comment Type **TR** *Comment Status* **A** *RS-FEC*

The overview should be brief but precise. Including MDIO mapping at this point would be best to be avoided. While the transmission latency is larger the overall latency may or may not be increased.

SuggestedRemedy

Change:
This clause specifies an optional Reed-Solomon forward error correction (RS-FEC) capability. RS-FEC PHY capability is indicated using MDIO register bit 3.2296.14 or equivalent means if MDIO is not implemented. The request to use the RS-FEC capability is negotiated during startup. PHYs implementing RS-FEC request use of the capability by setting MDIO register bit 3.2297.14 to one. A 100BASE-T1L PHY that supports this capability may add RS-FEC parity bits to the transmitted data to offer enhanced burst noise protection at the expense of increased latency.

To:
This clause specifies an optional Reed-Solomon forward error correction (RS-FEC) mode of operation. RS-FEC mode of operation is optional to implement and its use over a link segment is negotiated during startup. A 100BASE-T1L PHY operating in RS-FEC mode adds RS-FEC parity bits to the transmitted data to offer enhanced burst noise protection. The size of the PCS frame is larger when in RS-FEC mode of operation (see 190.3.3.1).

Response *Response Status* **C**

REVISED Change:This clause specifies an optional Reed-Solomon forward error correction (RS-FEC) capability. RS-FEC PHY capability is indicated using MDIO register bit 3.2296.14 or equivalent means if MDIO is not implemented. The request to use the RS-FEC capability is negotiated during startup. PHYs implementing RS-FEC request use of the capability by setting MDIO register bit 3.2297.14 to one. A 100BASE-T1L PHY that supports this capability may add RS-FEC parity bits to the transmitted data to offer enhanced burst noise protection at the expense of increased latency.To:This clause specifies an optional Reed-Solomon forward error correction (RS-FEC) mode of operation. RS-FEC mode of operation is optional to implement and its use over a link segment is negotiated during startup. A 100BASE-T1L PHY operating in RS-FEC mode adds RS-FEC parity bits to the transmitted data to offer enhanced burst noise protection. The size of the PCS frame is larger when in RS-FEC mode of operation (see 190.3.3.1) and increases PHY latency.

Cl **190** *SC* **190.1.2** *P* **56** *L* **40** # 186

Slavick, Jeff — Broadcom

Comment Type **T** *Comment Status* **A** *RS-FEC*

Adding a reference to where the negotiation takes place is useful. Additionally the amount of latency increase being significant is a relative term that some may view as insignificant in the overall scheme of things.

SuggestedRemedy

Change:
Support for RS-FEC is optional. RS-FEC is enabled only if both PHYs advertise it. When RS-FEC is enabled, the two PHYs sharing a link segment add RS-FEC parity octets to each transmitted PCS frame to offer enhanced burst noise protection. RS-FEC results in a significant increase in latency.

To:
Support for RS-FEC is optional and is enabled only when both PHYs request its use (see 190.3.5.2.4). When RS-FEC is enabled, the two PHYs sharing a link segment add RS-FEC parity octets to each transmitted PCS frame to provide enhanced burst noise protection. Operating in RS-FEC mode typically results in an increase in PHY latency.

Response *Response Status* **C**

REVISED (commenter's revised text with the word typically removed - RS-FEC mode is specified in a way that doesn't just typically increase latency - it actually does.)Change:Support for RS-FEC is optional. RS-FEC is enabled only if both PHYs advertise it. When RS-FEC is enabled, the two PHYs sharing a link segment add RS-FEC parity octets to each transmitted PCS frame to offer enhanced burst noise protection. RS-FEC results in a significant increase in latency.To:Support for RS-FEC is optional and is enabled only when both PHYs request its use (see 190.3.5.2.4). When RS-FEC is enabled, the two PHYs sharing a link segment add RS-FEC parity octets to each transmitted PCS frame to provide enhanced burst noise protection. Operating in RS-FEC mode results in an increase in PHY latency.

Cl **190** *SC* **190.1.2** *P* **56** *L* **9** # 187

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *PCS*

You add one extra bit of data to each PCS frame, not to each 16B/17B block. And the 15 in front of the 16B looks strange.

SuggestedRemedy

Change: "One auxiliary bit is added to every 15 16B/17B blocks to create a PCS frame consisting of 32 octets."

To: "A PCS frame consisting of 32 octets is formed from 16B/17B blocks, 15 in total, plus one auxilary bit."

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.1.2** *P* **56** *L* **12** # 188

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *PCS*

You add one extra bit of data to each PCS frame, not to each 64B/65B block. And th 15 in front of the 64B looks strange

SuggestedRemedy

Change: "An auxiliary bit is added to each 15 64B/65B block resulting in 122 octets to which 6 RS-FEC parity octets are added to create a PCS frame consisting of 128 octets."

To: "A PCS frame of 128 octects is formed from 64B/65B block, 15 in total, plus one auxiliary bit resulting in 122 octets to which 6 RS-FEC parity octets are added."

Response *Response Status* **C**

REVISEDChange: "An auxiliary bit is added to each 15 64B/65B block resulting in 122 octets to which 6 RS-FEC parity octets are added to create a PCS frame consisting of 128 octets."To: "A PCS frame is formed from 64B/65B blocks, 15 in total, plus one auxiliary bit resulting in 122 octets to which six RS-FEC parity octets are added, resulting in 128 octets."

Cl **190** *SC* **190.1.2** *P* **56** *L* **22** # 189

Slavick, Jeff — Broadcom

Comment Type **T** *Comment Status* **A** *Editorial*

contained in the PCS is refering to they're part of the PCS functionality?

SuggestedRemedy

Change "contained in the PCS" with "functions of the PCS"

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.1.2.3** *P* **58** *L* **13** # 190

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **R** *Editorial*

What does "adapts signaling" mean in the context of EEE?

SuggestedRemedy

Change "adapts" to "limits" or "stops"

Response *Response Status* **C**

REJECTED CRG disagrees with commenter. "adapts signalling" is correct and consistent with several other clauses with similar EEE modes in IEEE Std 802.3-2022. Signalling is changed (or 'adapted') to a quiet-refresh format, not stopped or 'limited". Using different language here would suggest something different is done.

Cl **190** *SC* **190.1.3** *P* **58** *L* **39** # 191

Slavick, Jeff Broadcom

Comment Type **E** *Comment Status* **A** *EZ*

Some extra "the" before normal mode and training mode

SuggestedRemedy

Remove the two "the" before normal mode and training mode.

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.5.2** *P* **92** *L* **20** # 192

Slavick, Jeff Broadcom

Comment Type **T** *Comment Status* **A** *PCS*

What is a Low latency PCS frame? I don't see this term anywhere but in Figure 190-7

SuggestedRemedy

In Figure 190-7 change:
"low lateny" to "256b"
"Burst error protectioin" to "1024b"
"LL" to "32B"

Response *Response Status* **C**

REVISED Remove "Low Latency PCS frames" and "Burst error protection PCS frames" lines and labels from Figure 190-7. (lines 20-25 and lines 36-41).

Cl **190** *SC* **190.3.5.2.4** *P* **94** *L* **49** # 193

Slavick, Jeff Broadcom

Comment Type **TR** *Comment Status* **R** *EEE*

The bar to enable EEE mode of operation is quite high in that both sides must request it's operation.

SuggestedRemedy

Update it so you pass along both request and ability in the PHY capability bits for EEE. And make it so EEE mode is activated when both PHYs have the ability and one of the requests it to be enabled.
This would be done by renaming eee_adv to eee_ap and assigning eee_cap to be mapped from 3.2296.15 and assigning Oct10<3> to be eee_req which is mapped to 3.2297.15. And then updating the resolution to be if eee_cap of transmit and received are both 1 and eee_req (Oct10<3>) is a one in either the transmit or received capability bits EEE mode is enabled.

Response *Response Status* **C**

REJECTED CRG disagrees with commenter. The 'high bar' for using EEE is intentional. Target applications such as industrial applications are more stringent in timing and latency requirements, and the use of EEE which may impact application requirements.

Cl **190** *SC* **190.3.5.2.4** *P* **94** *L* **50** # 194

Slavick, Jeff Broadcom

Comment Type **TR** *Comment Status* **R** *RS-FEC*

The bar to enable RS-FEC mode of operation is quite high in that both sides must request it's operation.

SuggestedRemedy

Update it so you pass along both request and ability in the PHY capability bits for RS-FEC. And make it so RS-FEC mode is activated when both PHYs have the ability and one of the requests it to be enabled.
This would be done by renaming rs_adv to rs_ap and assigning rs_cap to be mapped from 3.2296.14 and assigning Oct10<2> to be rs_req which is mapped to 3.2297.14. And then updating the resolution to be if rs_cap of transmit and received are both 1 and rs_req (Oct10<2>) is a one in either the transmit or received capability bits RS-FEC mode is enabled.

Response *Response Status* **C**

REJECTED CRG disagrees with commenter. The 'high bar' for using RS-FEC is intentional. Target applications such as industrial applications are more stringent in the use of the higher-latency, or increased burst error tolerance, as these may impact application requirements.

Cl **190** *SC* **190.3.7.1.2** *P* **103** *L* **2** # 195

Slavick, Jeff Broadcom

Comment Type **T** *Comment Status* **A** *State diagrams*

When is rf_valid false?

SuggestedRemedy

Define when rf_valid is false.

Response *Response Status* **C**

REVISEDReplace "Boolean indication that is set TRUE if the received RS-FEC is valid. The RS-FEC frame is valid if the message as defined in 190.3.3.6.2 can be decoded." with"Boolean variable that is set TRUE if the received RS-FEC codeword can be successfully decoded. The variable rf_valid is set to FALSE if the received RS-FEC codeword cannot be corrected."

Cl **190** *SC* **190.3.3.5** *P* **80** *L* **13** # 196

Slavick, Jeff — Broadcom

Comment Type **ER** *Comment Status* **A** *EZ*

"See Table 190-1" is not a hyperlink to the table

SuggestedRemedy

Fix the link

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **5** # 197

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *State diagrams*

rx_char is supposedly a struct of a Boolean and an 8bit field. But later it calls it a 9-bit character and the encoding tables don't use True/False for Data v. Control encoding. And no mapping of is provided for whether Data is a 1 or Control is 1. So is it truly a 1b field plus an 8b field? Or is it an Enum for Data and Control and a mapping of which is which is needed.

SuggestedRemedy

Change "boolean value" to "enumeration" 3 times in the definition of rx_char and add "(1)" after data and "(0)" after control in the 3rd sentence

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **13** # 198

Slavick, Jeff — Broadcom

Comment Type **E** *Comment Status* **A** *EZ*

2 is less than ten, spell it out.

SuggestedRemedy

Change 2 to two

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.2** *P* **108** *L* **32** # 199

Slavick, Jeff — Broadcom

Comment Type **E** *Comment Status* **A** *EZ*

There should be a d at the end of enable in the NOTE

SuggestedRemedy

Change "when EEE is enable" to "when EEE is enabled" in NOTES in both part a & b of Figure 190-4

Response *Response Status* **C**

ACCEPTED Change "when EEE is enable" to "when EEE is enabled" in NOTEs in both part a & b of Figure 190-13, p107 and p108.

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **47** # 200

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *LPI*

Mixing definition and FSM setting of a variable should be avoided.

SuggestedRemedy

Change the last sentence of the rx_lpi_active definition from: "The parameter is set to its default value (FALSE) in each state of the PCS Receive state diagram of Figure 190'13 where it is not explicitly set TRUE."
To: "The parameter is TRUE when the PCS Receive state diagram Figure 190-13 is in the RX_LPI state and FALSE otherwise."
Remove the assignment of rx_lpi_active from the RX_LPI state in Figure 190-13 part b

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **101** *L* **45** # 201

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *Editorial*

rx_lpi_active is a Boolean is it not?

SuggestedRemedy

Begin the definition of rx_lpi_active with the word Boolean

Response *Response Status* **C**

REVISED Change "Variable set " to "Boolean variable set "

Cl **190** *SC* **190.3.7.1.2** *P* **102** *L* **14** # 202

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *LPI*

Does tx_alert_start_next assert to TRUE for every possible valid position or just some of them?

SuggestedRemedy

Change "before any" to "prior to the"

Response *Response Status* **C**

REVISED Change "before any" to "before each"

Cl **190** *SC* **190.3.7.1.2** *P* **102** *L* **22** # 203

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *LPI*

Mixing definition and FSM setting of a variable should be avoided.

SuggestedRemedy

Change the definition of tx_lpi_enable to be:
"Boolean variable that is TRUE when the PCS (8N)B/(8N+1)B Transmit state diagram Figure 190-11 is in the TX_SLEEP state and FALSE otherwise."
Remove tx_lpi_enable <= TRUE from Figure 190-11

Response *Response Status* **C**

ACCEPTED

Cl **190** *SC* **190.3.7.1.2** *P* **102** *L* **14** # 204

Slavick, Jeff — Broadcom

Comment Type **TR** *Comment Status* **A** *LPI*

Does tx_sleep_start_next assert to TRUE for every possible valid position or just some of them?

SuggestedRemedy

Change "prior to any" to "prior to the"

Response *Response Status* **C**

REVISED Change "before any" to "before each"Comment references the wrong line for "tx_sleep_start_next" - should reference line 44.

Cl **98B** *SC* **98B.3** *P* **150** *L* **10** # 205

Murray, Brian — Analog Devices

Comment Type **T** *Comment Status* **A** *Late*

Technology ability fields require some organization to allow for future growth and ease of use. Organization was introduced in https://www.ieee802.org/3/dg/public/May_2025/Curran_3dg_01_09162025.pdf.

SuggestedRemedy

Incorporate changes shown in Curran_3dg_01a_11102025.pdf

Response *Response Status* **C**

ACCEPTED