

Cl 22 SC Figure 22-6a P 31 L 19 # 1 [redacted]
 Marris, Arthur Cadence
 Comment Type T Comment Status D
 What is the relevance of PLS.CARRIER.indication in this description of transmit operation?
 SuggestedRemedy
 Consider deleting PLS.CARRIER.indication from this diagram. Or maybe it should be moved to Figure 22-9a which describes receive operation?
 Proposed Response Response Status O

Cl 48 SC Figure 48-3a P 133 L 4 # 5 [redacted]
 Marris, Arthur Cadence
 Comment Type T Comment Status D
 Should it not be LI in all lanes? Not just in lane 0?
 SuggestedRemedy
 As above
 Proposed Response Response Status O

Cl 36 SC Figure 36-7a P 81 L 4 # 2 [redacted]
 Marris, Arthur Cadence
 Comment Type T Comment Status D
 RXD<7:0> <= 0000 0001 should be add to LP_IDLE state actions.
 SuggestedRemedy
 as above
 Proposed Response Response Status O

Cl 22 SC 22.2.2.6a P 30 L 33 # 6 [redacted]
 Marris, Arthur Cadence
 Comment Type TR Comment Status D
 It is not the MAC that controls LPI transitions it is the LPI client.
 SuggestedRemedy
 Change 'MAC device' to 'LPI client' and put in a cross-reference to Clause 78
 Do the same in 22.2.2.9a on page 32.
 Also in 22.7a on page 33.
 Add LPI client to Figure 22-20a removing mention of station management.
 Proposed Response Response Status O

Cl 36 SC 36.2.5.2.6 P 83 L 47 # 3 [redacted]
 Marris, Arthur Cadence
 Comment Type T Comment Status D
 Missing underline on added paragraph
 SuggestedRemedy
 Underline the penultimate paragraph on page 83.
 Proposed Response Response Status O

Cl 35 SC 35.2.2.6a P 70 L 47 # 7 [redacted]
 Marris, Arthur Cadence
 Comment Type TR Comment Status D
 It is not the MAC that controls LPI transitions it is the LPI client.
 SuggestedRemedy
 Change 'MAC device' to 'LPI client' and put in a cross-reference to Clause 78.
 Also 35.2.2.9a on page 72.
 Proposed Response Response Status O

Cl 46 SC Table 46-3 P 127 L 14 # 4 [redacted]
 Marris, Arthur Cadence
 Comment Type T Comment Status D
 Delete '(in all lanes)'. This does not seem to make sense.
 SuggestedRemedy
 As above
 Proposed Response Response Status O

Cl 46 SC 46.3.1.5a P 127 L 44 # 8
Marris, Arthur Cadence

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

It is not the MAC that controls LPI transitions it is the LPI client.

SuggestedRemedy

Change 'MAC device' to 'LPI client' and put in a cross-reference to Clause 78.

Also 46.3.2.4a on page 130.

Proposed Response Response Status **O**

Cl 46 SC Figure 46-7a P 128 L 11 # 9
Marris, Arthur Cadence

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

TXC should show high for regular idle and FB start of frame.

SuggestedRemedy

Have TXC high for everything except the three Xs indicating frame data at the right hand side of the figure.

Also do the same for RXC in Figure 46-8a

Proposed Response Response Status **O**

Cl 46 SC 46.3 P 126 L 34 # 10
Marris, Arthur Cadence

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

The proposed use of a new type of idle for 10G has a big impact on existing implementations and seems unnecessary when sequence ordered sets could be used for link status signalling.

SuggestedRemedy

Please consider defining a new sequence ordered set to indicate LPI for 10Gbit Ethernet (see Table 46-5 in existing 802.3 standard). This would have less impact on existing implementations and could be transported by existing network infrastructure.

Proposed Response Response Status **O**

Cl 00 SC 0 P L # 11
CHOU, JOSEPH REALTEK SEMICON

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

The meaning and value of TX_LP_IDLE and RX_LP_IDLE are not clearly defined in the draft but are used in the following clauses:

TX_LP_IDLE: 24.2.2, 24.2.2.5, 24.2.3.1, and 36.2.4.12a

RX_LP_IDLE: 24.2.2, 24.2.2.5, 24.2.3.1, 35.2.2.9a, and 36.2.4.12a

SuggestedRemedy

Need to define them or replace them with actual contents

Proposed Response Response Status **O**

Cl 24 SC 24.2.4.2 P 47 L 10 # 12
CHOU, JOSEPH REALTEK SEMICON

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

The value of LP_IDLE in Figure 24-8 is not defined here. It is apparently the codeword 0001 specified in Table 22-1 and also defined as TX_LP_IDLE in 24.2.3.1. This LP_IDLE is used in several places in this figure.

SuggestedRemedy

Either replace LP_IDLE with TX_LP_IDLE and define TX_LP_IDLE clearly in 24.2.3.1 or replace it with the value 0001.

Proposed Response Response Status **O**

Cl 24 SC 24.2.4.4 P 49 L 13 # 13
CHOU, JOSEPH REALTEK SEMICON

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

The value of LP_IDLE in Figure 24-11b is not defined here. It is apparently the codeword 0001 specified in Table 22-2 and also defined as RX_LP_IDLE in 24.2.3.1. This LP_IDLE is used in several places in this figure.

SuggestedRemedy

Either replace LP_IDLE with RX_LP_IDLE and define RX_LP_IDLE clearly in 24.2.3.1 or replace it with the value 0001.

Proposed Response Response Status **O**

CI 00 SC 0 P 19 L 37 # 14
 Maguire, Valerie Siemon

Comment Type E Comment Status D

Insert text to reference the TIA cabling equivalent to ISO class D. This revision is consistent with text in other locations of the document (see clause 78.1.1, page 237, line 27).

SuggestedRemedy

Revise sentence as follows:

"The medium for 10BASE-Te is a channel meeting or exceeding the requirements of the Class D channel specified by ISO/IEC 11801:1995 or the category 5 channel specified by ANSI/TIA/EIA-568-A-1995."

Proposed Response Response Status O

CI 00 SC 0 P 21 L 4 # 15
 Maguire, Valerie Siemon

Comment Type E Comment Status D

Insert text to reference the TIA cabling equivalent to ISO class D. This revision is consistent with text in other locations of the document (see clause 78.1.1, page 237, line 27).

SuggestedRemedy

Revise sentence as follows:

"...so that it matches the worst case insertion loss for a Class D channel as specified in ISO/IEC 11801:1995 or for a category 5 channel as specified in ANSI/TIA/EIA-568-A-1995."

Proposed Response Response Status O

CI 00 SC 0 P 25 L 20 # 16
 Maguire, Valerie Siemon

Comment Type E Comment Status D

Insert text to reference the TIA cabling equivalent to ISO class D and add a note (similar to the existing ISO note) indicating that the latest version of the standard specifies a media that exceeds the minimum requirements of the standard. This revision is consistent with text in other locations of the document (see clause 78.1.1, page 237, line 27).

Note: ANSI/TIA-568-C.2 is anticipated to published August, 2008.

SuggestedRemedy

Insert text as follows:

"...the requirements of the Class D channel specified by ISO/IEC 11801:1995 or the category 5 channel as specified in ANSI/TIA/EIA-568-A-1995.

NOTE - ANSI/TIA-568-C.2 provides a specification for category 5e media that exceeds the minimum requirements of this standard."

Leave the note related to ISO as it stands.

Proposed Response Response Status O

CI 00 SC 0 P 19 L 14 # 17
 Maguire, Valerie Siemon

Comment Type E Comment Status D

Insert text to reference the TIA cabling equivalent to ISO class D. This revision is consistent with text in other locations of the document (see clause 78.1.1, page 237, line 27).

SuggestedRemedy

Insert text as follows:

"...for operation over 0 m to at least 100 m of ISO/IEC 11801:1995 Class D, ANSI/TIA/EIA-568-A-1995 category 5, or better cabling."

Proposed Response Response Status O

Cl 45 SC 45.2.3.9b P 121 L 25 # 18
 McIntosh, James Vitesse

Comment Type E Comment Status D

I realized the acronym WTF clearly has the technical meaning of "Wake Time Fault" in this context, but there is another common use of this acronym among the internet community that is inappropriate.

SuggestedRemedy

Avoid use of acronym WTF, or replace with a different one.

Proposed Response Response Status O

Cl 40 SC 40.2.11 P 95 L 8 # 19
 McIntosh, James Vitesse

Comment Type ER Comment Status D

There is a subclause numbering problem starting here. There are two subclause 40.2.11s. The first is on page 94, line (PMA_LPIMODE.indication) and the second is on page 95, line 8 (PMA_LPIREQ.request).

SuggestedRemedy

Renumber subclauses 40.2.xx starting here (page 95, line8):
 40.2.12 PMA_LPIREQ.request

Proposed Response Response Status O

Cl 40 SC 40.5.1.1 P 111 L 25 # 20
 McIntosh, James Vitesse

Comment Type ER Comment Status D

Register 3.22 in Table 40.3 is called "1000BASE-T wake error counter" here, but called "EEE wake error counter" in clause 45.

SuggestedRemedy

Rename to "EEE wake error counter".

Proposed Response Response Status O

Cl 45 SC 45.2.3.2 P 119 L 21 # 21
 McIntosh, James Vitesse

Comment Type ER Comment Status D

LL is defined in Table 45-84 as Latching Low. LH is not defined here, but I assume that it stands for Latching High.

SuggestedRemedy

Add footnote to bottom of Table 45-84:
 LH = Latching High

Proposed Response Response Status O

Cl 45 SC 45.2.3.9a.5 P 121 L 15 # 22
 McIntosh, James Vitesse

Comment Type ER Comment Status D

We reference subclause 40.2.11 here and in subclause 45.2.7.13a.5 (page 122, line 53) as the definition of support of EEE operation for 1000BASE-T. This does not seem correct. Would 40.1.3 be a better reference?

SuggestedRemedy

Change reference/link to 40.1.3 (or the appropriate reference).

Proposed Response Response Status O

Cl 45 SC 45.2.3.9a.6 P 121 L 19 # 23
 McIntosh, James Vitesse

Comment Type ER Comment Status D

We reference subclause 25.4.11 here and in subclause 45.2.7.13a.6 (page 123, line 3) as the definition of support of EEE operation for 100BASE-TX. This does not seem correct. Would 24.1.1 be a better reference?

SuggestedRemedy

Change reference/link to 24.1.1 (or the appropriate reference).

Proposed Response Response Status O

CI 40 SC 40.5.1.2 P 112 L 27 # 24
 Healey, Adam LSI Corporation
 Comment Type T Comment Status D
 Unformatted next page 4 serves no purpose and need not be sent.
 SuggestedRemedy
 Delete Page 4 (Unformatted next page) from Table 40-4.
 Proposed Response Response Status O

CI 40 SC 40.1.3 P 90 L 4 # 25
 Healey, Adam LSI Corporation
 Comment Type T Comment Status D
 Additional test modes should be defined to facilitate verification of a device's compliance to the specification.
 SuggestedRemedy
 Presentation to be submitted for Task Force review.
 Proposed Response Response Status O

CI 22 SC 22.7a.2.2 P 34 L 30 # 26
 Healey, Adam LSI Corporation
 Comment Type T Comment Status D
 It has been established that no PHY, within the scope of P802.3az, requires a minimum LPI assertion time.
 SuggestedRemedy
 Delete the definition of li_timer and its use in the Transmit LPI state diagram (Figure 22-21).
 Proposed Response Response Status O

CI 24 SC 24.2.4.2 P 47 L 12 # 27
 Healey, Adam LSI Corporation
 Comment Type T Comment Status D
 Now that lpi_tx_ts_timer and lpi_tx_tr_timer are of the same duration, the states TX_SLEEP and TX_REFRESH are essentially identical in that they execute the same actions and share the same exit conditions. The state diagram could be simplified by merging them.
 SuggestedRemedy
 Merge the TX_SLEEP and TX_REFRESH states.
 Proposed Response Response Status O

CI 28C SC 28C.12 P 256 L 44 # 28
 Healey, Adam LSI Corporation
 Comment Type T Comment Status D
 "...with at least two unformatted next pages that contain information defined in 45.2.7.13a."
 There is currently only one unformatted next page following the message page.
 SuggestedRemedy
 Change to "...with at least one unformatted next page..."
 Proposed Response Response Status O

CI 40 SC 40.6.1.2.7 P 112 L 36 # 29
Healey, Adam LSI Corporation

Comment Type T Comment Status D

1. There is no need to define an upper bound on the signal level that is delivered after 700 ns. A PHY that delivers a full amplitude signal should still be compliant.

2. The concept of "symbols ratio" is not clearly defined in the draft, but for the purpose of the wake signal it seems that nothing more than the signal level needs to be defined.

SuggestedRemedy

Change:

"The wake signal shall be between 50 and 75% of the nominal idle levels with a symbols ratio within 10% of a nominal idle signal. These requirements shall be met within 700 ns following entry into the WAKE state."

To:

"The wake signal shall be no less than 50% of the nominal idle levels within 700 ns following entry into the WAKE state."

Proposed Response Response Status O

CI 40 SC 40.5.1.2 P 111 L 39 # 30
Healey, Adam LSI Corporation

Comment Type T Comment Status D

This text should be updated to describe the additional next page exchanges for Energy Efficient Ethernet.

SuggestedRemedy

Update the text accordingly.

Proposed Response Response Status O

CI 40 SC 40.5.1.2 P 112 L 20 # 31
Healey, Adam LSI Corporation

Comment Type T Comment Status D

Table 40-4 is missing the EEE Technology Message page.

SuggestedRemedy

Define Page 3 as a Message next page with the EEE technology message code. Page 4 would then be the Unformatted next page currently defined as Page 3.

Proposed Response Response Status O

CI 22 SC 22.2.2.6a P 31 L 4 # 32
Traeber, Mario Infineon Technologies

Comment Type E Comment Status D

"> minimum LPI assertion time" in Figure 22-6a became obsolete in one of the last drafts and is not referred somewhere else anymore.

SuggestedRemedy

Remove it from the drawing

Proposed Response Response Status O

CI 78 SC 78.2.3 P 244 L 29 # 33
Traeber, Mario Infineon Technologies

Comment Type ER Comment Status D

100BASE-TX timing parameters contain inconsistent values (MAX=MIN and not fitting to clause 24)

SuggestedRemedy

Insert Timing Values which are consistent to Table 24-2

Proposed Response Response Status O

CI 24 SC 24.2.2.1.1 P 42 L # 34
Traeber, Mario Infineon Technologies

Comment Type ER Comment Status D

PCS code group P does not properly specify the MII (TXD/RXD) which is "undefined". In general this would also hold true for the Idle "I" group.

SuggestedRemedy

Make a link into clause 22 specifying the coding of P at the MII or alternatively inserting "0001" and a footnot commenting on TX_EN and TX_ER coding.

Proposed Response Response Status O

CI 24 SC 24.2.4.4 P 49 L # 35
Traeber, Mario Infineon Technologies

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

The RX_SLEEP state does not encode all possible cases for a state-transition leading to a hand-up of the FSM in case of Transmitter false behavior. In particular this happens when the lpi_rx_ts_timer expires but still signal power is present (which might be subject to a transmitter false behavior).

SuggestedRemedy

Introduce a state-transition to RX_LPI_LIN_FAIL when signal_status=ON*lpi_rx_ts_timer_done

Proposed Response Response Status **O**

CI 22 SC 22.7a.2 P 35 L # 36
Traeber, Mario Infineon Technologies

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

Figure 22-21 TX LPI State Diagram does not include the case when the MAC is allowed to assert LPI first after a link-up. In particular this could cause problems in 100BASE-TX modes since the state-diagram suggests that the MAC could signal an LPI assertion directly after reset, i.e. during ANEG (which is useless) or link-up of 100BASE-TX. This in turn could cause link-up instabilities.

SuggestedRemedy

Introduce a state "WAIT_ON_LINKUP" into which a transition goes after reset. Only after Link-Up has been indicated via Management Registers the MAC is allowed to assert LPI. In case of a Link-Down or reset a re-transition into "WAIT_ON_LINKUP" is required.

Proposed Response Response Status **O**

CI 35 SC 35.1.1 P 69 L 25 # 37
Booth, Brad AMCC

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

Sentence is a bit confusing.

SuggestedRemedy

Change to read:
The GMII may also support low power idle signaling as defined for Energy Efficient Ethernet in Clause 78.

Proposed Response Response Status **O**

CI 51 SC 51.8a.1 P 159 L 41 # 38
Booth, Brad AMCC

Comment Type **T** Comment Status **D**

The PMA sublayer mentions a PMD signal called energy_detect, but there is no energy_detect in any of the supporting PMD sublayers.

The PCS also references this signal.

Could this signal be an extra state of the signal_detect from the PMD? The SIGNAL_OK could be expanded to be OK, FAIL and ENERGY_DETECTED.

SuggestedRemedy

Either add energy_detect to the PMD sublayers or add a new state for the signal_detect variable from the PMD.

Proposed Response Response Status **O**

CI 51 SC 51 P 159 L 26 # 39
Booth, Brad AMCC

Comment Type **T** Comment Status **D**

The PMA service interface also has a physical instantiation known as XSBI. There are no changes to XSBI to permit the exchange of the energy_detect variable across the physical interface.

SuggestedRemedy

Provide a means to pass the energy_detect information across XSBI.

Proposed Response Response Status **O**

CI 22 SC 22.2.1.3.3 P 29 L 20 # 40
Dietz, Bryan Alcatel-Lucent

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

Note that this paragraph was the subject of a maintenance request at the last meeting. The first sentence is supposed to be removed, either by 802.3az or another project.

SuggestedRemedy

Proposed Response Response Status **O**

Cl 22 SC 22.7a P 33 L 1544 # 41
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D

Clarify explanation of LPI operation by editing text. The following sentence is unclear and hard to read.

"Similarly, RX_ER and RXD<3:0> are mapped to PLS_DATA.indication except when LP_IDLE is detected and CRS is mapped to PLS_CARRIER.indication except when LP_IDLE.request is asserted or the wake timer has yet to expire."

SuggestedRemedy

Restructure the following paragraph:

"The LPI assertion and detection mechanism fits conceptually between the PLS Service Primitives and the MII signals as shown in Figure 22-20a. The definition of TX_EN, TX_ER and TXD<3:0> is derived from the state of PLS_DATA.request (22.2.1.1), except when it is overridden by an assertion of LP_IDLE.request. Similarly, RX_ER and RXD<3:0> are mapped to PLS_DATA.indication except when LP_IDLE is detected and CRS is mapped to PLS_CARRIER.indication except when LP_IDLE.request is asserted or the wake timer has yet to expire."

to read (use bullets for the sub points)

"The LPI assertion and detection mechanism fits conceptually between the PLS Service Primitives and the MII signals as shown in Figure 22-20a.

" The definition of TX_EN, TX_ER and TXD<3:0> is derived from the state of PLS_DATA.request (22.2.1.1), except when it is overridden by an assertion of LP_IDLE.request.

" Similarly, RX_ER and RXD<3:0> are mapped to PLS_DATA.indication, except when LP_IDLE is detected

" CRS is mapped to PLS_CARRIER.indication, except when LP_IDLE.request is asserted or the wake timer has yet to expire."

Proposed Response Response Status O

Cl 24 SC 24.4.1 P 53 L 53 # 42
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D

Typo:

SuggestedRemedy

Typo: change "the Energy Efficient Ethernet" to "Energy Efficient Ethernet".

Proposed Response Response Status O

Cl 24 SC 24.4.1.5 P 54 L 35 # 43
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D

Typo:

SuggestedRemedy

Insert space between "4" and "Figure 24-8".

Proposed Response Response Status O

Cl 35 SC 35.2.2.4 P70 L 912 # 44
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D
 Editorial change: use of "and" to join two unlike clauses.

SuggestedRemedy
 Replace paragraph:

"While TX_EN is de-asserted and TX_ER is asserted, TXD<7:0> are used to request the PHY to generate an assertion of low power idle; Carrier Extend or Carrier Extend Error code-groups. The use of TXD<7:0> during the transmission of a frame with carrier extension is described in 35.2.2.5 and low power idle transitions are described in 35.2.2.6a. Carrier extension shall only be signaled immediately following the data portion of a frame."

With:

"While TX_EN is de-asserted and TX_ER is asserted, TXD<7:0> are used to request the PHY to generate an assertion of low power idle, Carrier Extend or Carrier Extend Error code-groups. The use of TXD<7:0> during the transmission of a frame with carrier extension is described in 35.2.2.5. Carrier extension shall only be signaled immediately following the data portion of a frame. The use of TXD<7:0> to signal low power idle transitions is described in 35.2.2.6a."

Proposed Response Response Status O

Cl 35 SC 35.2.2.7 P71 L 35 # 45
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D
 Editorial change: use of "and" to join two unlike clauses.

SuggestedRemedy
 Replace paragraph:

"While RX_DV is de-asserted, the PHY may provide a False Carrier indication or assert low power idle by asserting the RX_ER signal while driving the specific value listed in Table 35-2 onto RXD<7:0>. See 36.2.5.2.3 for a description of the conditions under which a PHY will provide a False Carrier indication and low power idle transitions are described in 35.2.2.9a."

"While RX_DV is de-asserted, the PHY may provide a False Carrier indication or assert low power idle by asserting the RX_ER signal while driving the specific value listed in Table 35-2 onto RXD<7:0>. See 36.2.5.2.3 for a description of the conditions under which a PHY will provide a False Carrier indication. Low power idle transitions are described in 35.2.2.9a."

Proposed Response Response Status O

Cl 46 SC 46.3.1.5a P128 L 2 # 46
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D
 Typo

SuggestedRemedy
 Delete one of the two periods.

Proposed Response Response Status O

Cl 49 SC 49.2.4.4 P145 L 54 # 47
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D
 Typo

SuggestedRemedy
 Replace trailing right parenthesis with period.

Proposed Response Response Status O

Cl 71 SC 71.1 P208 L 45 # 48
 Dietz, Bryan Alcatel-Lucent

Comment Type E Comment Status D
 Consistent terminology

SuggestedRemedy
 Change "inter-frame" to "inter-frame idle"

Proposed Response Response Status O

Cl 71 **SC 71.6.12** **P 210** **L 29** # **49**
 Dietz, Bryan Alcatel-Lucent

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

Change /LPI/ to /LI/ to be consistent with rest of document. Also make the same change in page 220, line 18.

SuggestedRemedy
 Change /LPI/ to /LI/ to be consistent with rest of document. Also make the same change in page 220, line 18.

Proposed Response *Response Status* **O**

Cl 72 **SC 72.1** **P 218** **L 18** # **50**
 Dietz, Bryan Alcatel-Lucent

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

Change "inter-frame" to "inter-frame idle" to be consistent with the rest of the document.

SuggestedRemedy
 Change "inter-frame" to "inter-frame idle" to be consistent with the rest of the document.

Proposed Response *Response Status* **O**

Cl 74 **SC 74.7.4.7** **P 231** **L 4** # **51**
 Dietz, Bryan Alcatel-Lucent

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

Typo

SuggestedRemedy
 Remove period before "FEC"

Proposed Response *Response Status* **O**

Cl 78 **SC 78.1.5.1** **P 241** **L 410** # **52**
 Dietz, Bryan Alcatel-Lucent

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

Clarify text. Edit the "de-assert" description to match the style and format of the "assert" description by combining two short paragraphs.

SuggestedRemedy
 Change the three paragraphs starting at page 240 line 51 to read:

"When the Low Power Idle request is deasserted, indicated by the LPI_REQUEST parameter set to DEASSERT in the LP_IDLE.request primitive of the LPI Client interface, the LPI assert function starts to transmit the 'normal inter-frame' encoding on the xMII. After a delay the LPI assert function sets the CARRIER_STATUS parameter to CARRIER_OFF in the PLS_CARRIER.indication primitive of the PLS service interface, allowing the MAC to start transmitting again.

The delay on deassert is provided to allow the link partner to prepare for normal operation.

The delay has a PHY dependant default value but this value can be adjusted using the Data Link Layer capabilities defined in 78.4.

Proposed Response *Response Status* **O**

Cl 78 **SC 78.2.2** **P 243** **L 27** # **53**
 Dietz, Bryan Alcatel-Lucent

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

Change "Low Power Mode" to "Low Power Idle Mode" to match other definitions on this page.

SuggestedRemedy
 Change "Low Power Mode" to "Low Power Idle Mode" to match other definitions on this page.

Proposed Response *Response Status* **O**

CI 78 SC 78.3 P 244 L 43 # 54
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Change "using frames" to "using L2 protocol frames".
 SuggestedRemedy
 Change "using frames" to "using L2 protocol frames".
 Proposed Response Response Status O

CI 78 SC 78.4 P 245 L 5 # 55
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Minor editorial clarification.
 SuggestedRemedy
 Change "Devices that require additional sleep times" to "Devices that require longer wake up times".
 Proposed Response Response Status O

CI 78 SC 78.4 P 245 L 18 # 56
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Use plural form
 SuggestedRemedy
 Change "Implementation" to "Implementations".
 Proposed Response Response Status O

CI 78 SC 78.4.1.2 P 246 L 3940 # 57
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 First sentence in paragraph is duplicated.
 SuggestedRemedy
 Remove duplicated first sentence in this paragraph. Remove duplicated first sentence in this paragraph.
 Proposed Response Response Status O

CI 78 SC 78.4.1.2 P 246 L 37 # 58
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Clarification
 SuggestedRemedy
 Consider swapping sections 78.4.1.1 and 78.4.1.2. The meaning of Tw is more clear if the Receive Tw is described before Transmit Tw.
 Proposed Response Response Status O

CI 78 SC 78.4.4.1 P 247 L 51 # 59
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Typo
 SuggestedRemedy
 Add space before word "constants".
 Proposed Response Response Status O

Cl 78 SC 78.4.4.3 P 249 L 7 # 60
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Clarify meaning of variable.
 SuggestedRemedy
 Insert "Data Link Layer ready" before "This variable indicates..." The term "dll" has other software meanings that are confusing in this case.
 Proposed Response Response Status O

Cl 78 SC 78.4.4.5 P 250 L 9 # 61
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 EEE is defined only for point-to-point full duplex links. Delete "a set of" or replace with "two".
 SuggestedRemedy
 EEE is defined only for point-to-point full duplex links. Delete "a set of" or replace with "two".
 Proposed Response Response Status O

Cl 78 SC 78.4.5.1 P 253 L 49 # 62
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Simplify text describing state diagram operation.
 SuggestedRemedy
 Simplify text by replacing:
 "Irrespective of whether the transmitting link partner enters the SYSTEM REALLOCATION state from the TX UPDATE state; it ultimately returns to the RUNNING state through the UPDATE MIRROR state where it updates the echo for the Receive Tw_sys."
 with
 "The transmitting link partner enters MIRROR UPDATE state either from SYSTEM REALLOCATION or directly from TX UPDATE state. UPDATE MIRROR state then updates the echo for the Receive Tw_sys and returns to the RUNNING state."
 Proposed Response Response Status O

Cl 78 SC 78.4.4.5 P 252 L 24 # 63
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Variable "New_RX_VALUE" in left exit condition from CHANGE should be "NEW_RX_VALUE".
 SuggestedRemedy
 Variable "New_RX_VALUE" in left exit condition from CHANGE should be "NEW_RX_VALUE".
 Proposed Response Response Status O

Cl 78 SC 78.4.5.2 P 254 L 12 # 64
 Dietz, Bryan Alcatel-Lucent
 Comment Type E Comment Status D
 Clarify explanation of state diagram operation.
 SuggestedRemedy
 Clarify text by replacing:
 "Irrespective of whether the receiving link partner enters the SYSTEM REALLOCATION state, it ultimately gets to the RX UPDATE state."
 with
 "The receiving link partner ultimately enters RX UPDATE state, either from SYSTEM REALLOCATION state or directly from CHANGE state."
 Proposed Response Response Status O

Cl 78 SC 78.4.3 P 247 L 22 # 65
 Dietz, Bryan Alcatel-Lucent
 Comment Type T Comment Status D
 The times listed in paragraph 1 and paragraph 2 should be consistent.
 SuggestedRemedy
 Insert "Under normal operation," in front of first sentence of paragraph.
 Proposed Response Response Status O

Comments

IEEE P802.3az D1.3 Energy Efficient Ethernet comments

May 2009

Cl 78 **SC 78.1.5.3.1** **P 241** **L 39** # **66**
 Dietz, Bryan Alcatel-Lucent

Comment Type E **Comment Status D**

100Base-T should be 100Base-TX.

SuggestedRemedy
 Change 100Base-T to 100Base-TX

Proposed Response **Response Status O**

Cl 78 **SC 78.2.3** **P 243** **L 42** # **67**
 Dietz, Bryan Alcatel-Lucent

Comment Type E **Comment Status D**

Please add "(SSD)" after "start of shell delimiter". This would clarify references in other parts of the text.

SuggestedRemedy
 Please add "(SSD)" after "start of shell delimiter". This would clarify references in other parts of the text.

Proposed Response **Response Status O**

Cl 78 **SC 78.4.4.5** **P 251** **L 28** # **68**
 Dietz, Bryan Alcatel-Lucent

Comment Type TR **Comment Status D**

The state diagram transition condition between TX UPDATE and SYSTEM REALLOCATION contains an "OR" that should be an "AND".

This comment was discussed in the L2 ad-hoc, and should be fixed in part of the ad-hoc report.

SuggestedRemedy
 Change condition to "AND".

Proposed Response **Response Status O**

Cl 78 **SC 78.4.4.5** **P 252** **L 16** # **69**
 Dietz, Bryan Alcatel-Lucent

Comment Type T **Comment Status D**

The state diagram transition condition between RUNNING and CHANGE depends upon a condition RemTxSystemValue CHANGED. The meaning of CHANGED is not specified - CHANGED since what or since when.

See also page 251 line 15.

This comment was discussed in the L2 ad-hoc and the fix should be part of the ad-hoc report.

SuggestedRemedy
 There are two potential changes: add a note to explain CHANGED or define a variable that can be compared against RemTxSystemValue.

Proposed Response **Response Status O**

Cl 78 **SC 78.1.1** **P 237** **L 27** # **70**
 Dietz, Bryan Alcatel-Lucent

Comment Type E **Comment Status D**

Editorial suggestion

SuggestedRemedy
 Change "Definition of 10BASE-Te allows power consumption saving." to "The definition of 10Base-Te allows reduced power consumption."

Proposed Response **Response Status O**

Cl 78 **SC 78.1.4** **P 239** **L 3** # **71**
 Dietz, Bryan Alcatel-Lucent

Comment Type E **Comment Status D**

Parts of this clause use smaller than normal typeface.

SuggestedRemedy
 Update type faces to match.

Proposed Response **Response Status O**

Cl 78 **SC 78.1.4** **P 239** **L 5** # **72**

Dietz, Bryan Alcatel-Lucent

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

Word "primatives" is misspelled

SuggestedRemedy
Change to "primatives"

Proposed Response *Response Status* **O**

Cl 78 **SC 78.1.5.1** **P 240** **L 53** # **73**

Dietz, Bryan Alcatel-Lucent

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

Typo

SuggestedRemedy
Capitalize "the" at the start of the last sentence in the paragraph.

Proposed Response *Response Status* **O**

Cl 72 **SC 72.8** **P 224** **L 5** # **74**

Bennett, Michael LBNL

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

It appears that the subclause reference in the editor's change instructions are off by 1 on lines 5, 40 and 44.

SuggestedRemedy
on line 5, change 72.7.3 to 72.8.3
on line 40, change 72.7.3 to 72.8.3
on line 44, change 72.7.3 to 72.8.3

Proposed Response *Response Status* **O**

Cl 72 **SC 72.8.3** **P 224** **L 23** # **75**

Bennett, Michael LBNL

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

Table 72.8.3 states that FEC is optional, however the support choice is "Yes"
There should be a choice of "No"

This existed before we opened the clause, so I want to discuss whether or not we fix it or submit a maintenance request, but this is low priority

SuggestedRemedy
If we are going to fix it, add a "No[]" choice

Proposed Response *Response Status* **O**

Cl 72 **SC 72.8** **P 225** **L 28** # **76**

Bennett, Michael LBNL

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

line 28 has:

FS12 Low Power Idle function 72.6.11 Enters LowPower_st when requested
LPI:M Yes [] N/A

there are no brackets after the N/A

SuggestedRemedy
add brackets after N/A

Proposed Response *Response Status* **O**

Cl 72 SC P L # 77
 Bennett, Michael LBNL

Comment Type **TR** Comment Status **D**
 Subclause references and value/comment fields are incomplete on lines 43 and 45 and Subclause references on lines 48, 50 and line 3 on page 228 are incomplete. Subclauses refer to 72.6.11.x

For example on p 227, the feature is "LPI Transmit state diagram" and the subclause is 72.6.11.x, the value/comment is Meets requirement of Figure72-x, but the LPI Transmit state diagram is shown in figure 49-16 on page 154

SuggestedRemedy
 Change references to point to the relevant PCS clauses.

Proposed Response Response Status **O**

Cl 72 SC 72.6.11 P 220 L 14 # 78
 Bennett, Michael LBNL

Comment Type **TR** Comment Status **D**
 On line 14:

Energy Efficient Ethernet capabilities and parameters will be advertised during the Backplane Auto-negotiation, as described in Clause 45

Should be clause 73

SuggestedRemedy
 change to refer to clause 73

Proposed Response Response Status **O**

Cl 48 SC Fig48-3a P 133 L # 79
 Pillai, Velu Broadcom

Comment Type **TR** Comment Status **D**
 LI should be asserted on all four lanes

SuggestedRemedy

Proposed Response Response Status **O**

Cl 49 SC Fig 49-15 P 153 L # 80
 Pillai, Velu Broadcom

Comment Type **TR** Comment Status **D**
 Transition to RX_INIT should be reset+ r_test_mode + hi_ber + !rx_block_lock
 SuggestedRemedy

Proposed Response Response Status **O**

Cl 72 SC Table 72-6 P 222 L # 81
 Pillai, Velu Broadcom

Comment Type **TR** Comment Status **D**
 Subclause reference is wrong for Vtw, Vtd, and Vta

SuggestedRemedy
 Correct subclause reference is 72.6.5

Proposed Response Response Status **O**

Cl 72 SC Table 72.9 P 223 L # 82
 Pillai, Velu Broadcom

Comment Type **TR** Comment Status **D**
 Subclause reference is wrong for Tsd and Tsa

SuggestedRemedy
 Correct subclause is 72.6.4

Proposed Response Response Status **O**

Cl 49 SC Fig 49-17 P 155 L # 83
 Pillai, Velu Broadcom

Comment Type **TR** Comment Status **D**
 RX_DEACT state is missing. Please refer to the state diagram shown in page 5 of pillai_01_0409

SuggestedRemedy

Proposed Response Response Status **O**

CI 74 SC P L # 84
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

What is the effect of link being on low power state on the FEC Lock state diagram is not clear from the current clause 74 in the IEEE802.3az specification ? It is not clear if the fec_block_lock must go to false when the transmission on the link has stopped i.e. when link is in low power state.

SuggestedRemedy

The state diagram (figure 74-8 of the IEEE 802.3 spec) could be updated to clarify the effect of energy_detect = false.

Proposed Response Response Status O

CI 74 SC P L # 85
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

FEC Counters may show false errors during transitions in and out of Quiet mode.

SuggestedRemedy

Proposed Response Response Status O

CI 74 SC Annex 74A P L # 86
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

Table B1 and Table C1 sequences has errors. Need corrections.

SuggestedRemedy

Proposed Response Response Status O

CI 49 SC Fig 49-15 P 153 L # 87
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

This state machine does not handle LI code words appearing during normal mode. pillai_01_0409 page 3 shows the necessary changes.

SuggestedRemedy

Proposed Response Response Status O

CI 49 SC Fig 49-15 P 153 L # 88
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

State RX_LI has rx_raw . DECODE(rx_coded)

SuggestedRemedy

It should be rx_raw <= LI

Proposed Response Response Status O

CI 49 SC Fig 49-15 P 153 L # 89
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

The arc that loops back for RX_LI is qualified by "!signal_ok + R_TYPE(rx_coded) = LI". When the transmitter starts the refresh or wake sequence the signal_ok becomes valid, but R_TYPE may not be LI. Which means the state machine will arc towards RX_E. This will assert an error in the RS layer.

SuggestedRemedy

It should be ""rx_lpi_active" to be consistant with 10GBASE-T state diagram. This state diagram should keep asserting /LI/ towards the RS layer, until the RX LPI State diagram comes out of LPI mode. Please refer to pillai_01_0409

Proposed Response Response Status O

CI 49 SC 49-16 P 154 L # 90
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

TX_REFRESH is still shown in this state diagram. This will not handle the PHY when FEC is enabled. In March pillai_01_0309 proposed changes to KR phy when FEC is enabled. In order to handle that proposal this statemachine needs the changes as shown in page 4 of pillai_01_0409.

SuggestedRemedy

Proposed Response Response Status O

CI 49 SC Fig 49-17 P 155 L # 91
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

This state diagram needs changes to handle the proposal on pillai_01_0309. rx_lpi_active is needed to handle the PCS receive state diagram arc. R_TYPE(rx_coded)=LI should be R_TYPE(rx_coded) !=LI for the transition from RX_WAKE and RX_WTF. Also some of the transitions need changes as shown in page 5 of pillai_01_0409.

SuggestedRemedy

Proposed Response Response Status O

CI 49 SC Fig 49-13 P L # 92
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

CI49 BER monitor state diagram (Fig 49-13): When in EEE mode, block_lock is latched in CI49 Rx lpi fsm. During transitions in and out of Quiet mode, PCS gets some garbage data which will trigger hi_ber. When hi_ber is set, 10G-R link is dropped. To avoid this freeze the BER fsm during low power mode. The proposal is shown in page 6 of pillai_01_0409.

SuggestedRemedy

Proposed Response Response Status O

CI 48 SC Fig 48-9 P 138 L # 93
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

PCS_receive state diagram shown in Fig 48-9 needs changes to avoid asserting non LI during transitioning in and out of quiet mode. Using rx_lpi_active as shown in page 7 of pillai_01_0409 will help to avoid the wrong assertion. RECEIVE_LPI is not needed either.

SuggestedRemedy

Proposed Response Response Status O

CI 48 SC Fig 48-9b P 141 L # 94
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

RX_ACTIVE and RX_SLEEP needs rx_lpi_active. LPI_fail_timer is not needed in RX_LINK_FAIL state. Please refer to page 8 of pillai_01_0409.

SuggestedRemedy

Proposed Response Response Status O

CI 36 SC Fig 36-7a P 81 L # 95
 Pillai, Velu Broadcom

Comment Type TR Comment Status D

Without "rx_lpi_active" transition from LPI_K to IDEL_D can happen during transitioning in and out of quiet mode (transition from LPI_K to IDLE_D). To avoid this AND detect_idle with rx_lpi_active. Please refer to page 9 of pillai_01_0409.

SuggestedRemedy

Proposed Response Response Status O

CI 36 SC Fig 36-9b P 86 L # 96
 Pillai, Velu Broadcom

Comment Type TR Comment Status D
 PCS LPI transmit state diagram need rx_lpi_active. Please refer to page 10 of pillai_01_0409.

SuggestedRemedy

Proposed Response Response Status O

CI 46 SC 46.3.1.5a P 128 L # 97
 Pillai, Velu Broadcom

Comment Type TR Comment Status D
 - TXC needs to be high during IDLE
 - This diagram should show TXC<3:0>, TXD<31:24>, TXD<23:16>, TXD<15:8>, TXD<7:0>.
 - Page 127, line 51 is not correct. TXC<3:0> is 0XF during IDLE and LPI.

SuggestedRemedy

Proposed Response Response Status O

CI 46 SC 46.3.2.4a P 130 L # 98
 Pillai, Velu Broadcom

Comment Type TR Comment Status D
 - RXC needs to be high during IDLE
 - This diagram should show RXC<3:0>, RXD<31:24>, RXD<23:16>, RXD<15:8>, RXD<7:0>.
 - Line 9 is not correct. RXC<3:0> is 0XF during IDLE and LPI

SuggestedRemedy

Proposed Response Response Status O

CI 36 SC 36.2.5.2.9 P 86 L # 99
 Pillai, Velu Broadcom

Comment Type TR Comment Status D
 LPI status bits are added 3.1 register. 1000Base-X PCS does not have any definition in Cl45, 3.1 register. If new bits are added then standard has to defined the meaning of rest of the bits that register (Ex: fault)

SuggestedRemedy
 Add the 1000Base-X PCS LPI status in different register.

Proposed Response Response Status O

CI 46 SC Cl46.3.1.5a P 128 L # 100
 Pillai, Velu Broadcom

Comment Type TR Comment Status D
 During Idle TXC<3:0> = 0xF, TXD<31:24>, TXD<23:16>, TXD<15:8>, TXD<7:0> are 0x07 each
 During LP Idle TXC<3:0> = 0xF, TXD<31:24>, TXD<23:16>, TXD<15:8>, TXD<7:0> are 0x06 each

SuggestedRemedy
 Show data and control for all four lanes

Proposed Response Response Status O

CI 46 SC Cl46.3.2.4a P 130 L # 101
 Pillai, Velu Broadcom

Comment Type TR Comment Status D
 During Idle RXC<3:0> = 0xF, RXD<31:24>, RXD<23:16>, RXD<15:8>, RXD<7:0> are 0x07 each
 During LP Idle RXC<3:0> = 0xF, RXD<31:24>, RXD<23:16>, RXD<15:8>, RXD<7:0> are 0x06 each

SuggestedRemedy
 Show data and control for all four lanes

Proposed Response Response Status O

Cl 01 SC 1.3 P15 L 31 # 102
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Status was checked during 802.3-2008 revision.
 SuggestedRemedy
 Delete editor's note box & subclause heading.
 Proposed Response Response Status O

Cl 01 SC 1.4 P15 L 39 # 103
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 After 4 drafts, it is clear that no commenters think that there are more terms to add.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 01 SC 1.5 P16 L 3 # 104
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 After 4 drafts, it is clear that no commenters think that there are more abbreviations to add.
 SuggestedRemedy
 Delete editor's note box & the bogus subclause heading.
 Proposed Response Response Status O

Cl 01 SC 1 P15 L 1 # 105
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 This header may be useful but it doesn't need to be repeated for every clause - it's a waste of electrons!
 SuggestedRemedy
 Delete ", Clause 1"
 Proposed Response Response Status O

Cl 01 SC 1 P15 L 14 # 106
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 The editor's note with revision history and comments has not been kept up to date since July 2008. Therefore it is clearly not considered useful by either editors or commenters.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 14 SC 14.4 P25 L 3 # 107
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 After 4 drafts, it is clear that no commenters think that there are further link segment specifications to make.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 14 SC 14.10.4.5.12 P26 L 28 # 108
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 After 4 drafts, it is clear that no commenters think that any further PICS items are required.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Comments

IEEE P802.3az D1.3 Energy Efficient Ethernet comments

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Cl 14 SC 14 P17 L 1 # 109
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 24 SC 24.2.2.5 P43 L 5 # 113
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 22 SC 22 P27 L 3 # 110
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 24 SC 24.8.2.2 P55 L 20 # 114
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 also on page 56, line 3
 Proposed Response Response Status O

Cl 22 SC 22.7 P35 L 4 # 111
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 24 SC 24 P37 L 1 # 115
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 22 SC 22 P27 L 1 # 112
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 25 SC 25.3 P 57 L 9 # 116
 Barrass, Hugh Cisco

Comment Type ER Comment Status D
 Editor's note appears to highlight some inconsistencies in the draft.
 If these are real - fix them, otherwise the editor's note is incorrect.
 In either case - delete the editor's note!

SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 25 SC 25.4 P 59 L 34 # 117
 Barrass, Hugh Cisco

Comment Type E Comment Status D
 The editor tries...
 It appears that the editor has been successful - hoorah!

SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 25 SC 25.5.1 P 65 L 8 # 118
 Barrass, Hugh Cisco

Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 25 SC 25 P 57 L 1 # 119
 Barrass, Hugh Cisco

Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 28C SC 28C P 256 L 8 # 120
 Barrass, Hugh Cisco

Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 30 SC 30 P 67 L 3 # 121
 Barrass, Hugh Cisco

Comment Type T Comment Status D
 The editor's note highlights a deficiency in the draft.
 SuggestedRemedy
 Add MIB object definitions based on the text in Clause 78 & copying the style of 802.3at MIB definitions.
 Delete the editor's note
 Proposed Response Response Status O

Cl 30 SC 30 P 66 L 1 # 122
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 35 SC 35 P 69 L 4 # 123
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note box.
 Proposed Response Response Status O

Cl 35 SC 35.5 P 73 L 48 # 124
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note
 Proposed Response Response Status O

Cl 35 SC 35 P 68 L 1 # 125
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 36 SC 36.2.5.2.8 P 86 L 39 # 126
 Barrass, Hugh Cisco
 Comment Type T Comment Status D
 (comment originally from Velu)
 Effectively the same as comment #128 from the previous draft. Fig 36-9b LPI receive state diagram.
 Make the same changes as were accepted for Clause 49, wake time fault.
 SuggestedRemedy
 Add new state RX_WTF, counter wake_error_counter and timer rx_wf_timer - both as in Clause 49.
 Exit conditions from the new state are the same as RX_WAKE.
 Proposed Response Response Status O

Cl 36 SC 36.2.5.2.8 P 86 L 20 # 127
 Barrass, Hugh Cisco
 Comment Type T Comment Status D
 Effectively the same as comment #89 from the previous draft.
 Is is really necessary to "de-bounce" signal_detect = FAIL?
 The value of signal_detect is communicated from the PMA sublayer to indicate that the PMD detects the presence of a signal AND that the PMA is able to synchronize to that signal. This is unlikely to be tricked by the power-down transient of the link partner transmitter.
 SuggestedRemedy
 Remove RX_DEACT state and delete the definition of rx_deact_timer.
 Proposed Response Response Status O

Cl 36 **SC 36.2.5.1.3** **P77** **L 16** # 128
 Barrass, Hugh Cisco

Comment Type **T** **Comment Status** **D**
 (comment originally from Velu)

Also, applies to receive state diagram (fig 36-9b)

Reverse the effect of comment #166 from the previous draft :-)

There is a requirement for a variable that has the same definition as rx_lpi_mode used to have.

SuggestedRemedy
 Restore the definition of rx_lpi_mode and the control of that variable in the receive state diagram.

Change the variable name to rx_lpi_active; change the 2 states to TRUE (formerly ON) and FALSE(formerly OFF).

Proposed Response *Response Status* **O**

Cl 36 **SC 36.2.5.2.2** **P81** **L 5** # 129
 Barrass, Hugh Cisco

Comment Type **T** **Comment Status** **D**
 (comment originally from Velu)

fig 36-7a PCS receive state diagram

The state machine needs to stay in state LPIDLE_MODE during LP idle.

SuggestedRemedy
 Change all 3 exit conditions from state LPI_K to include "(rx_lpi_active = FALSE)"

Proposed Response *Response Status* **O**

Cl 36 **SC 36** **P76** **L 4** # 130
 Barrass, Hugh Cisco

Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.

SuggestedRemedy
 Delete the editor's note box.

Proposed Response *Response Status* **O**

Cl 36 **SC 36.7** **P87** **L 48** # 131
 Barrass, Hugh Cisco

Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.

SuggestedRemedy
 Delete the editor's note

Proposed Response *Response Status* **O**

Cl 36 **SC 36** **P75** **L 1** # 132
 Barrass, Hugh Cisco

Comment Type **E** **Comment Status** **D**
 It's not necessary to have this boilerplate text for every clause.

SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.

Proposed Response *Response Status* **O**

Cl 40 **SC 40** **P89** **L 1** # 133
 Barrass, Hugh Cisco

Comment Type **E** **Comment Status** **D**
 It's not necessary to have this boilerplate text for every clause.

SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.

Proposed Response *Response Status* **O**

Cl 45 **SC 45** **P 117** **L 3** # **134**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.
SuggestedRemedy
 Delete the editor's note box.
Proposed Response **Response Status** **O**

Cl 45 **SC 45.5** **P 124** **L 4** # **135**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.
SuggestedRemedy
 Delete the editor's note
Proposed Response **Response Status** **O**

Cl 45 **SC 45** **P 116** **L 1** # **136**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 It's not necessary to have this boilerplate text for every clause.
SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
Proposed Response **Response Status** **O**

Cl 46 **SC 46.3.1.5a** **P 128** **L 12** # **137**
 Barrass, Hugh Cisco
Comment Type **T** **Comment Status** **D**
 (comment originally from Velu)
 In fig 46-7a TXC should be shown HIGH during IDLE after wake.
 Also, make it clear in the diagram and the text that TXC & TXD are the same for all 4 lanes.
SuggestedRemedy
 As per comment.
Proposed Response **Response Status** **O**

Cl 46 **SC 46.3.2.4a** **P 130** **L 23** # **138**
 Barrass, Hugh Cisco
Comment Type **T** **Comment Status** **D**
 (comment originally from Velu)
 In fig 46-8a RXC should be shown HIGH during IDLE after wake.
 Also, make it clear in the diagram and the text that RXC & RXD are the same for all 4 lanes.
SuggestedRemedy
 As per comment.
Proposed Response **Response Status** **O**

Cl 46 **SC 46** **P 126** **L 4** # **139**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.
SuggestedRemedy
 Delete the editor's note box.
Proposed Response **Response Status** **O**

Cl 46 **SC 46.5** **P 131** **L 4** # **140**

Barrass, Hugh Cisco

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

Editor's note is no longer needed.

SuggestedRemedy

Delete the editor's note

Proposed Response **Response Status** **O**

Cl 46 **SC 46** **P 125** **L 1** # **141**

Barrass, Hugh Cisco

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

It's not necessary to have this boilerplate text for every clause.

SuggestedRemedy

Delete all the boilerplate text up to the Clause heading.

Proposed Response **Response Status** **O**

Cl 48 **SC 48.2.6.2** **P 138** **L 21** # **142**

Barrass, Hugh Cisco

Comment Type **T** **Comment Status** **D**

(comment originally from Velu)

fig 48-9 PCS receive state diagram

The state machine needs to stay in state LPIDLE_MODE during LP idle.

SuggestedRemedy

Change exit condition from state LPIDLE_MODE to (rx_lpi_active = FALSE) * AUDI

Also, delete state RECEIVE_LPI and take exit path from LPIDLE_MODE directly to RECEIVE.

Proposed Response **Response Status** **O**

Cl 48 **SC 48.2.6.1.3** **P 135** **L 26** # **143**

Barrass, Hugh Cisco

Comment Type **T** **Comment Status** **D**

(comment originally from Velu)

Also, applies to receive state diagram (fig 48-9b)

Reverse the effect of comment #167 from the previous draft :-)

There is a requirement for a variable that has the same definition as rx_lpi_mode used to have.

SuggestedRemedy

Restore the definition of rx_lpi_mode and the control of that variable in the receive state diagram.

Change the variable name to rx_lpi_active; change the 2 states to TRUE (formerly ON) and FALSE (formerly OFF).

Proposed Response **Response Status** **O**

Cl 48 **SC 48.2.6.2.5** **P 141** **L 19** # **144**

Barrass, Hugh Cisco

Comment Type **T** **Comment Status** **D**

Effectively the same as comment #89 from the previous draft.

Is is really necessary to "de-bounce" signal_detect = FAIL?

The value of signal_detect is communicated from the PMA sublayer to indicate that the PMD detects the presence of a signal AND that the PMA is able to synchronize to that signal. This is unlikely to be tricked by the power-down transient of the link partner transmitter.

SuggestedRemedy

Remove RX_DEACT state and delete the definition of rx_deact_timer.

Proposed Response **Response Status** **O**

Cl 48 SC 48.2.6.2.5 P 141 L 40 # 145
Barrass, Hugh Cisco

Comment Type T Comment Status D

(comment originally from Velu)

Effectively the same as comment #128 from the previous draft. Fig 48-9b LPI receive state diagram.

Make the same changes as were accepted for Clause 49, wake time fault.

SuggestedRemedy

Add new state RX_WTF, counter wake_error_counter and timer rx_wf_timer - both as in Clause 49.

Exit conditions from the new state are the same as RX_WAKE.

Proposed Response Response Status O

Cl 48 SC 48 P 131 L 30 # 146
Barrass, Hugh Cisco

Comment Type E Comment Status D

Editor's note is no longer needed.

SuggestedRemedy

Delete the editor's note box.

Proposed Response Response Status O

Cl 48 SC 48.7 P 143 L 5 # 147
Barrass, Hugh Cisco

Comment Type E Comment Status D

Editor's note is no longer needed.

SuggestedRemedy

Delete the editor's note

Proposed Response Response Status O

Cl 48 SC 48 P 132 L 1 # 148
Barrass, Hugh Cisco

Comment Type E Comment Status D

It's not necessary to have this boilerplate text for every clause.

SuggestedRemedy

Delete all the boilerplate text up to the Clause heading.

Proposed Response Response Status O

Cl 49 SC 49.2.13.3 P 153 L 5 # 149
Barrass, Hugh Cisco

Comment Type T Comment Status D

(comment originally from Velu)

receive state diagram (fig 49-15)

In state RX_LI, rx_raw should be fixed to LI so that garbage is suppressed during wake-up.

SuggestedRemedy

Change "DECODE(rx_coded)" to "/LI/"

Proposed Response Response Status O

Cl 49 SC 49.2.13.3 P 153 L 5 # 150
Barrass, Hugh Cisco

Comment Type T Comment Status D

(comment originally from Velu)

receive state diagram (fig 49-15)

State machine needs to stay in state RX_LI while rx_lpi_active is true.

SuggestedRemedy

For the 2 exit conditions, change "signal_ok" to "rx_lpi_active = FALSE."

Delete the loop around transition (it is redundant anyway).

Proposed Response Response Status O

Cl 49 SC 49.2.13.3 P 153 L 7 # 151
Barrass, Hugh Cisco

Comment Type T Comment Status D

(comment originally from Velu)

receive state diagram (fig 49-15)

If an /LI/ code is received during a non-IPG state then an error must be flagged.

SuggestedRemedy

Change exit condition from RX_INIT state from "R_TYPE(rx_coded) = (E + D + T)" to "R_TYPE(rx_coded) = (E + D + T+ LI)"

Change exit condition from RX_D state from "R_TYPE(rx_coded) = (E + C + S)" to "R_TYPE(rx_coded) = (E + C + S + LI)"

Proposed Response Response Status O

Cl 49 SC 49.2.13.3 P 153 L 20 # 152
Barrass, Hugh Cisco

Comment Type T Comment Status D

(probably an artifact of FrameMaker)

receive state diagram (fig 49-15)

Exit condition from state RX_C (towards flag "E") is missing its end.

SuggestedRemedy

Change exit condition to "R_TYPE(rx_coded) = LI"

Proposed Response Response Status O

Cl 49 SC 49.2.13.2.2 P 150 L 2 # 153
Barrass, Hugh Cisco

Comment Type T Comment Status D

(comment originally from Velu)

Also, applies to receive state diagram (fig 49-15)

Reverse the effect of comment #81 from the previous draft :-)

There is a requirement for a variable that has the same definition as rx_lpi_mode used to have.

SuggestedRemedy

Restore the definition of rx_lpi_mode and the control of that variable in the receive state diagram.

Change the variable name to rx_lpi_active; change the 2 states to TRUE (formerly ON) and FALSE (formerly OFF).

Proposed Response Response Status O

Cl 49 SC 49.2.9 P 147 L 24 # 154
Barrass, Hugh Cisco

Comment Type T Comment Status D

(comment originally from Velu)

The BER state machine (Fig 49-13) needs to be changed so that high BER is not reported during the shutdown & restart phases. BER should only be monitored when the PCS is locked.

SuggestedRemedy

Change fig 49-13.

Change "!block_lock" to "!rx_block_lock"

Proposed Response Response Status O

Cl 49 SC 49.3 P 158 L 4 # 155
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note
 Proposed Response Response Status O

Cl 55 SC 55.3.4a.1 P 172 L 31 # 159
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note says convert to a active reference.
 SuggestedRemedy
 do it, then delete the editor's note.
 Proposed Response Response Status O

Cl 49 SC 49 P 144 L 1 # 156
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 55 SC 55 P 161 L 1 # 160
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 51 SC 51.10 P 160 L 4 # 157
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 Editor's note is no longer needed.
 SuggestedRemedy
 Delete the editor's note
 Proposed Response Response Status O

Cl 69 SC 69 P 198 L 1 # 161
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 51 SC 51 P 159 L 1 # 158
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 70 SC 70 P 200 L 1 # 162
 Barrass, Hugh Cisco
 Comment Type E Comment Status D
 It's not necessary to have this boilerplate text for every clause.
 SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
 Proposed Response Response Status O

Cl 71 **SC 71** **P 208** **L 1** # **163**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 It's not necessary to have this boilerplate text for every clause.
SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
Proposed Response **Response Status** **O**

Cl 78 **SC 78** **P 237** **L 3** # **167**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.
SuggestedRemedy
 Delete the editor's note box.
Proposed Response **Response Status** **O**

Cl 72 **SC 72** **P 217** **L 1** # **164**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 It's not necessary to have this boilerplate text for every clause.
SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
Proposed Response **Response Status** **O**

Cl 78 **SC 78.4** **P 245** **L 12** # **168**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.
SuggestedRemedy
 Delete the editor's note box.
Proposed Response **Response Status** **O**

Cl 73A **SC 73A** **P 258** **L 8** # **165**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 Editor's note is no longer needed.
SuggestedRemedy
 Delete the editor's note box.
Proposed Response **Response Status** **O**

Cl 78 **SC 78.4** **P 245** **L 26** # **169**
 Barrass, Hugh Cisco
Comment Type **ER** **Comment Status** **D**
 Editor's note indicates that cross reference table will be added.
SuggestedRemedy
 Add the cross reference table, delete the editor's note box.
Proposed Response **Response Status** **O**

Cl 74 **SC 74** **P 229** **L 1** # **166**
 Barrass, Hugh Cisco
Comment Type **E** **Comment Status** **D**
 It's not necessary to have this boilerplate text for every clause.
SuggestedRemedy
 Delete all the boilerplate text up to the Clause heading.
Proposed Response **Response Status** **O**

Cl 78 SC 78.4.1 P 245 L 35 # 170
 Barrass, Hugh Cisco

Comment Type ER Comment Status D

Editor's note indicates that this section will be moved to Clause 79.

SuggestedRemedy

Add Clause 79 into this document.

Move the TLV definition from 78.4.1 to 79.6a, change 78.4.1 to resemble 33.6.1 from .3at.

Proposed Response Response Status O

Cl 78 SC 78.4.3 P 247 L 26 # 171
 Barrass, Hugh Cisco

Comment Type ER Comment Status D

The editor's note indicates some changes that might be made.

If the changes are made then the editor's note is no longer needed, if not it is moot.

SuggestedRemedy

In either case, delete the editor's note.

Proposed Response Response Status O

Cl 78 SC 78.4.4.5 P 250 L 3 # 172
 Barrass, Hugh Cisco

Comment Type E Comment Status D

Editor's note is no longer needed.

SuggestedRemedy

Delete the editor's note box.

Proposed Response Response Status O

Cl 78 SC 78.5 P 255 L 9 # 173
 Barrass, Hugh Cisco

Comment Type T Comment Status D

As far as this commenter understands, the conclusion of the wake time shrinkage concluded that the Tw_sys_rx for backplane PHYs should be the same as similar BASE-T PHYs.

SuggestedRemedy

Change the backplane TBD rows as follows:

1000BASE-KX: 12.76, 11, 0, 11, 1.76
 10GBASE-KX4: 11.88, 9, 0, 9, 2.88
 10GBASE-KR: 14.88, 12, 0, 12, 2.88

Add a new line for 10GBASE-KR (with scrambler_reset_enable = TRUE - use a footnote)

10GBASE-KR: 16.88, 14, 0, 14, 2.88

Proposed Response Response Status O

Cl 14 SC 14.3.1.2.1 P 23 L 27 # 174
 Grimwood, Michael Broadcom

Comment Type T Comment Status D

For 10BASE-Te, TP_IDL and data should be tested against the same twisted-pair model. This means that the voltage template requirements for transmission of TP_IDL should be met with the 10BASE-Te twisted-pair model.

SuggestedRemedy

Change:

"...with the load connected through the twisted-pair model as defined in Figure 14-7 and Figure 14-8."

To:

"...with the load connected through the twisted-pair model as defined in Figure 14-7 and Figure 14-8 for 10BASE-T and Figure 14-7a and Figure 14-8 for 10BASE-Te."

Proposed Response Response Status O

Cl 14 SC 14.3.1.2.1 P 24 L 3 # 175
Grimwood, Michael Broadcom

Comment Type T Comment Status D

For 10BASE-Te, the link test pulse and data should be tested against the same twisted-pair model. This means that the voltage template requirements for transmission of the link test pulse should be met with the 10BASE-Te twisted-pair model.

SuggestedRemedy

"...with the load connected through the twisted-pair model as defined in Figure 14-7 and Figure 14-8."

To:

"...with the load connected through the twisted-pair model as defined in Figure 14-7 and Figure 14-8 for 10BASE-T and Figure 14-7a and Figure 14-8 for 10BASE-Te."

Proposed Response Response Status O

Cl 22 SC 22.2.2.2 P 29 L 47 # 176
Grimwood, Michael Broadcom

Comment Type T Comment Status D

In figure 24-11a, the transition from the state IDENTIFY JK to the state START OF STREAM J is initially triggered by the sequence 11111 (/I) followed by 11000 (/J). This can be the same initial sequence that leads to a transition to the state START_RX_SLEEP (...111 11 000..). However, before the actual transition is complete, implementations may extend RX_CLK as described in the last paragraph of page 15 of 802.3-2005_section2.pdf. In the event that RX_CLK is extended as triggered by the bit sequence 11111 11000, the specification should be modified to allow this extension not only for the IDENTIFY JK to START of STREAM J state but also for the IDENTIFY JK to the START_RX_SLEEP state since the bit sequences that cause these transitions are initially indistinguishable.

SuggestedRemedy

On page 15 of 802.3-2005_section2.pdf in Section 22.2.2.2 (pertaining to the RX_CLK), append the following sentence to the last paragraph:

"For low power operation, when the receiver transitions from the IDENTIFY JK state to the START_RX_SLEEP state at the transition from the IDLE code-group /I/ to the SLEEP code-group /P/, the PHY may extend a cycle of RX_CLK by holding it in either the high or low condition for an interval that shall not exceed twice the nominal clock period."

Proposed Response Response Status O

Cl 24 SC 24.2.3.4 P 45 L 24 # 177
Grimwood, Michael Broadcom

Comment Type T Comment Status D

With the current allowable range of lpi_rx_ti_timer and considering the PCS receive state diagram of Figure 24-11b, it is possible to get into an endless loop due to the following sequence:

1. Erroneously enter RX_SLEEP (due to bit errors or misalignment)
2. Receive a minimum IPG (0.96 usec) of IDLE causing a transition to WAIT_IDLE.
3. Receive data before lpi_rx_ti_timer is done causing a transition back to RX_SLEEP.
4. Repeat 2. and 3.

SuggestedRemedy

Modify lpi_rx_ti_timer such that its maximum value is less than the minimum IPG.

Change:

"The timer shall have a period between 1.0 us to 1.2 us."

To:

"The timer shall have a period between 0.8 us to 0.9 us."

Proposed Response Response Status O

Cl 40 SC 40.6.1.2.5 P 111 L 47 # 178
Grimwood, Michael Broadcom

Comment Type T Comment Status D

Clarify that MASTER clock jitter specifications be met in low-power mode.

SuggestedRemedy

In section 40.6.1.2.5 change:

When in the normal mode of operation as the MASTER, the peak-to-peak value of the MASTER TX_TCLK jitter relative to an unjittered reference shall be less than 1.4 ns.

To:

When in the normal or low power modes of operation as the MASTER, the peak-to-peak value of the MASTER TX_TCLK jitter relative to an unjittered reference shall be less than 1.4 ns.

Proposed Response Response Status O

CI 45 **SC 45.2.3.9a** **P 120** **L 46** # **179**
 Grimwood, Michael Broadcom

Comment Type **T** **Comment Status** **D**

Introduce capabilities and advertisement bits related to 10BASE-Te to allow management selection of the transmitter mode when devices support both 10BASE-T and 10BASE-Te.

SuggestedRemedy
 Introduce 10BASE-Te capability bit to 3.20.0 and 10BASE-Te advertisement bits to 7.60.0 and 7.61.0.

A presentation will be submitted for the April/May EEE interim detailing the rationale and rules for resolving the mode.

Proposed Response **Response Status** **O**

CI 40 **SC 40.6.1.2.7** **P 112** **L 36** # **180**
 Grimwood, Michael Broadcom

Comment Type **T** **Comment Status** **D**

The transmitter wake signal specification has several elements that are either unclear or undefined. Why is there not a single threshold? (For example, If the wake signal is at 90% of nominal idle level 600 nsec after the beginning of Wake, this is outside of the two threshold values so does this mean that the signal is non-compliant?). Also, symbols ratio is not defined. Why is an additional 10% tolerance applied?

This comment suggest simplifying this specification to make it clear.

SuggestedRemedy
 Change:

The wake signal shall be between 50 and 75% of the nominal idle levels with a symbols ratio within 10% of a nominal idle signal. These requirements shall be met within 700 ns following entry into the WAKE state.

To:

The wake signal shall be at least 75% of the analog signal levels corresponding to a nominal PAM3 {+2, 0, -2} idle signal. These requirements shall be met within 700 ns following entry into the WAKE state.

Proposed Response **Response Status** **O**

CI 55 **SC 55.3.2.3** **P 171** **L 2** # **181**
 Grimwood, Michael Broadcom

Comment Type **T** **Comment Status** **D**

Clarify that the LDPC syndrome and CRC8 errors are not monitored during LPI. This clarification is needed for consistency with Figure 55-16 since otherwise undesired transitions to RX_INIT could occur during LPI.

SuggestedRemedy
 In 802.3an-2006, page 92, add the following sentence after the fourth paragraph (ending with "...on the XGMII.");

"LDPC frame errors are not monitored during low-power operation."

Proposed Response **Response Status** **O**

CI 55 **SC 55.3.5.4** **P 178** **L 6** # **182**
 Grimwood, Michael Broadcom

Comment Type **T** **Comment Status** **D**

Clarify that LFER Monitor function is not performed during LPI. This clarification is needed for consistency with Figure 55-16 since otherwise undesired transitions to RX_INIT could occur during LPI.

SuggestedRemedy
 In 802.3an-2006, page 98, in section 55.3.5.4 change the last paragraph from:

"The PCS shall perform the functions of LFER Monitor, Transmit, and Receive as specified in these state machines."

To:

"The PCS shall perform the functions of LFER Monitor, Transmit, and Receive as specified in these state machines. The PCS shall not perform the LFER Monitor function during low-power operation from the time that the PCS 64B/65B Receiver detects a sleep block until the state RX_W is exited."

Proposed Response **Response Status** **O**

Cl 55 SC 55.4.2.2 P 185 L 4 # 183
Grimwood, Michael Broadcom

Comment Type T Comment Status D

Specify that the PMA transmit function continuously sources TX_TCLK to explicitly require that jitter and clock drift specifications be met during low-power operation.

SuggestedRemedy

In section 55.4.2.2 1st sentence, 2nd paragraph change:

When the PMA_CONFIG.indication parameter config is MASTER, the PMA Transmit function shall source TX_TCLK from a local clock source while meeting the transmit jitter requirements of 55.5.3.3.

To:

When the PMA_CONFIG.indication parameter config is MASTER, for both normal and lower-power operation, the PMA Transmit function shall continuously source TX_TCLK from a local clock source while meeting the transmit jitter requirements of 55.5.3.3.

Proposed Response Response Status O

Cl 78 SC 78.1.4 P 239 L 4 # 184
Grimwood, Michael Broadcom

Comment Type E Comment Status D

Smaller font was used for the following:

"These services are described in..."

SuggestedRemedy

Make font size consistent.

Proposed Response Response Status O

Cl 78 SC 78.1.3.1 P 238 L 26 # 185
Grimwood, Michael Broadcom

Comment Type E Comment Status D

Make diagram label match acronym "PLS".

SuggestedRemedy

In diagram, change "Physical Signaling" to "Physical Layer Signaling".

Proposed Response Response Status O

Cl 78 SC 78.1.4 P 239 L 6 # 186
Grimwood, Michael Broadcom

Comment Type E Comment Status D

Typo.

SuggestedRemedy

"prmiavtes" should be "primitives"

Proposed Response Response Status O

Cl 78 SC 78.1.4.1.2 P 239 L 26 # 187
Grimwood, Michael Broadcom

Comment Type E Comment Status D

Consistent spelling of signaling vs. signalling

SuggestedRemedy

In Clause 78, change all four occurrences of "signalling" to "signaling".

Proposed Response Response Status O

Cl 78 SC 78.1.5.2 P 241 L 20 # 188
Grimwood, Michael Broadcom

Comment Type E Comment Status D

Inconsistent font used for the text, "normal interframe".

SuggestedRemedy

Make font consistent. Exact same issue in 78.1.5.3.1, p 241, line 51 and 78.1.5.3.2, p 242, line 28.

Proposed Response Response Status O

Cl 78 SC 78.2.3 P 244 L 9 # 189
Grimwood, Michael Broadcom

Comment Type E Comment Status D

Word usage.

SuggestedRemedy

Change "can be" to "is".

Proposed Response Response Status O

Cl 78 **SC 78.1.5** **P 240** **L 13** # **190**
 Grimwood, Michael Broadcom

Comment Type **E** **Comment Status** **D**
 Typo.

SuggestedRemedy
 Change "dependant" to "dependent".

Proposed Response **Response Status** **O**

Cl 78 **SC 78.1.5.1** **P 241** **L 12** # **191**
 Grimwood, Michael Broadcom

Comment Type **E** **Comment Status** **D**
 Typo, punctuation.

SuggestedRemedy
 Change "PHY dependant" to "PHY-dependent"

Proposed Response **Response Status** **O**

Cl 78 **SC 78.3** **P 244** **L 41** # **192**
 Grimwood, Michael Broadcom

Comment Type **T** **Comment Status** **D**
 Impose a minimum time between completing link-up and when the LPI Client can initially assert LPI in order to ensure a high-quality, stable link exists prior to entering LPI.

SuggestedRemedy
 If EEE is supported by both link partners for the negotiated PHY type then the EEE function may be used independently in either direction.

To:

If EEE is supported by both link partners for the negotiated PHY type then the EEE function may be used independently in either direction with the constraint that the Low Power Idle Client shall not set the LPI_REQUEST parameter to ASSERT until at least 5 msec after link_status=OK.

Proposed Response **Response Status** **O**

Cl 73 **SC Annex73** **P 258** **L** # **193**
 Pillai, Velu Broadcom

Comment Type **TR** **Comment Status** **D**
 Annex 73A says EEE technology messages will follow the transmission of this page with at least two unformatted next pages that contain information defined in 45.2.7.13a which amounts to 144 bits sent when there are only 6 bits of information defined.

The 6 bits of information can be transferred as part of the message page and thus only require 48 bits of transmission

SuggestedRemedy
 Either Add table like in Annex 28C for clarity or put more text to explain the MP10 bit information. pillai_01_0409 that will be posted during the May interim will also address the remedy.

Proposed Response **Response Status** **O**

Cl 78 **SC 78.1.5** **P 240** **L 13** # **194**
 Parnaby, Gavin Solarflare Communica

Comment Type **E** **Comment Status** **D**
 dependant should be dependent

SuggestedRemedy
 as comment

Proposed Response **Response Status** **O**

Cl 78 **SC 78.1.5.1** **P 240** **L 53** # **195**
 Parnaby, Gavin Solarflare Communica

Comment Type **E** **Comment Status** **D**
 capitalise 'the' to 'The'

SuggestedRemedy
 as comment

Proposed Response **Response Status** **O**

CI 78 SC 78.1.5.1 P 241 L 6 # 196
 Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D
 font appears to be incorrect

also happens on line 20 same page, line 51 same page and line 28 next page

SuggestedRemedy
 use the same font as elsewhere

Proposed Response Response Status O

CI 78 SC 78.1.6 P 242 L 33 # 199
 Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D
 EEE defines Low Power Idle mode ...

SuggestedRemedy
 should be

EEE defines a Low Power Idle mode...

Proposed Response Response Status O

CI 78 SC 78.1.5.3 P 241 L 31 # 197
 Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D
 and should be an

SuggestedRemedy

Proposed Response Response Status O

CI 78 SC 78.2.3 P 243 L 44 # 200
 Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D
 add 'the' between 'between' and 'two'

same for line 49

SuggestedRemedy

Proposed Response Response Status O

CI 78 SC 78.1.5.3.2 P 242 L 22 # 198
 Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D
 delete 'some of the'

SuggestedRemedy

Proposed Response Response Status O

CI 78 SC 78.2.3 P 244 L 2 # 201
 Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D
 add 'the' before 'reception of an IDLE signal' and add 'the' before 'first data codewords'

SuggestedRemedy

Proposed Response Response Status O

Cl 78 **SC 78.2.3** **P 244** **L 9** # **202**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 can does not seem to be the right word here
SuggestedRemedy
 should or must would be better words.
Proposed Response *Response Status* **O**

Cl 78 **SC 78.5** **P 254** **L 30** # **206**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 Remove a .
SuggestedRemedy

Proposed Response *Response Status* **O**

Cl 78 **SC 78.4.1.2** **P 246** **L 38** # **203**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 Font is incorrect
SuggestedRemedy
 Correct font
Proposed Response *Response Status* **O**

Cl 78 **SC 78.5** **P 254** **L 35** # **207**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 typo 'paraneters'; also add 'the' before systems designer, replace while with 'when', change PHY's to PHYs (also on line 38 and 39)
SuggestedRemedy

Proposed Response *Response Status* **O**

Cl 78 **SC 78.4.1.3** **P 246** **L 49** # **204**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 partner should be device
SuggestedRemedy
 replace partner with device on lines 50, 51 and 52
Proposed Response *Response Status* **O**

Cl 48 **SC 48.2.6.1.3** **P 135** **L 38** # **208**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 delete is in 'is set to FALSE'
SuggestedRemedy

Proposed Response *Response Status* **O**

Cl 78 **SC 78.4.4.2** **P 248** **L 5** # **205**
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 than should be that
SuggestedRemedy

Proposed Response *Response Status* **O**

CI 48 SC 48.2.3 P 132 L 45 # 209
Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D

'The ability to transmit or receive Low Power Idle is an option for certain PHYs to support Energy Efficient Ethernet' isn't very clear. The ability to transmit or receive LPI is a requirement for PHYs that support EEE.

SuggestedRemedy

Change text to something like

'Certain PHYs may support Energy Efficient Ethernet. PHYs that support Energy Efficient Ethernet are able to transmit and receive Low Power Idle characters.'

Proposed Response Response Status O

CI 55 SC 55.3.2.2.21 P 170 L 21 # 210
Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D

PHY should be PHYs

SuggestedRemedy

Proposed Response Response Status O

CI 55 SC 55.4.2.2 P 185 L 13 # 211
Parnaby, Gavin Solarflare Communica

Comment Type E Comment Status D

Change 'is able to generate the alert signal ' to 'generates the alert alert signal as'

SuggestedRemedy

Proposed Response Response Status O

CI 78 SC 78.1.2 P 237 L 33 # 212
Parnaby, Gavin Solarflare Communica

Comment Type T Comment Status D

Why are objectives included?

SuggestedRemedy

Delete objectives

Proposed Response Response Status O

CI 78 SC 78.1.5.3.1 P 241 L 36 # 213
Parnaby, Gavin Solarflare Communica

Comment Type T Comment Status D

100BASE-T should be 100BASE-TX.

There are descriptions of 100BASE-TX, 1000BASE-T and 10GBASE-T EEE modes but nothing about backplane operation.

SuggestedRemedy

Correct 100BASE-T.

Add description of operation of the backplane EEE modes here (KX/KR/KX4)

Proposed Response Response Status O

CI 78 SC 78.2.1 P 243 L 5 # 214
Parnaby, Gavin Solarflare Communica

Comment Type T Comment Status D

Does it make sense to define states without any state diagram or normative requirements?

Do we need to define these states? They overlap with states defined in individual clauses. In my opinion this text confuses things rather than making this clearer.

SuggestedRemedy

Delete these state descriptions.

Proposed Response Response Status O

Comments

IEEE P802.3az D1.3 Energy Efficient Ethernet comments

May 2009

Cl 78 *SC 78.2.3* *P 243* *L 42* #
 Parnaby, Gavin Solarflare Communica
Comment Type **T** *Comment Status* **D**
 The propagation delay of a start of shell delimiter
 (lines 42 and 43)
SuggestedRemedy
 Replace with 'The propagation delay between the xxMII and the MDI'
Proposed Response *Response Status* **O**

Cl 78 *SC 78.3* *P 244* *L 37* #
 Parnaby, Gavin Solarflare Communica
Comment Type **T** *Comment Status* **D**
 the text says that Auto-Negotiation is performed upon detection of a PHY error.
 This is misleading. Auto-Negotiation is performed when the link drops.
SuggestedRemedy
 Reepplace PHY error with link failure.
Proposed Response *Response Status* **O**

Cl 73 *SC 78.1.1* *P 237* *L 30* #
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 EEE also specifies means
SuggestedRemedy
 should be
 EEE also specifies a means
Proposed Response *Response Status* **O**

Cl 78 *SC 78.1.1* *P 237* *L 24* #
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 ...EEE defines 10 Mb/s PHY ...
SuggestedRemedy
 should be EEE defines a 10 Mb/s PHY ...
Proposed Response *Response Status* **O**

Cl 78 *SC 78.1.4* *P 239* *L 6* #
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 prmiavtes
SuggestedRemedy
 primitives
Proposed Response *Response Status* **O**

Cl 78 *SC 78.1.4* *P 238* *L 3* #
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 font is incorrect
SuggestedRemedy
 use the same font as elsewhere
Proposed Response *Response Status* **O**

Cl 78 *SC 78.1.4.2.2* *P 239* *L 50* #
 Parnaby, Gavin Solarflare Communica
Comment Type **E** *Comment Status* **D**
 signaling/signalling are both used
SuggestedRemedy
 signaling is the american spelling
Proposed Response *Response Status* **O**

CI 78 SC 78.1.5 P 240 L 42 # 222
 Parnaby, Gavin Solarflare Communica
 Comment Type E Comment Status D
 and should be an
 SuggestedRemedy
 as comment
 Proposed Response Response Status O

CI 78 SC 78.1.3.2 P 238 L 51 # 223
 Parnaby, Gavin Solarflare Communica
 Comment Type E Comment Status D
 decided should be decide
 SuggestedRemedy
 change to decide
 Proposed Response Response Status O

CI 22 SC 22.2 P 30 L 40 # 224
 GUPTA, SUJAY Infosys Technologies
 Comment Type E Comment Status D
 The MAC should wait for the resolved time before asserting out of LPI.
 So changing;
 The MAC device should not assert TX_EN for valid transmit data until after the wake up
 time
 specified for the PHY.
 SuggestedRemedy
 The MAC device should not assert TX_EN for valid transmit data until after the resolved
 wake up time
 specified for the PHY.
 Proposed Response Response Status O

CI 24 SC 24.3 Figure 24-11b P 49 L 26 # 225
 GUPTA, SUJAY Infosys Technologies
 Comment Type T Comment Status D
 RX_WAKE->RX_QUIET on condition sig_status=OFF, Need to start the lpi_rx_tq timer
 again
 SuggestedRemedy
 Proposed Response Response Status O

CI 45 SC 45.2 P 120 L 11 # 226
 GUPTA, SUJAY Infosys Technologies
 Comment Type T Comment Status D
 Instead of mentioning state transition is undefined, it can be made dependent on the latch
 register status.
 Applies to the recv register as well.
 SuggestedRemedy
 The behavior if read is reliable only if the Transmit low power idle received(45.2.3.2.1a)
 latch register indicates the same state.
 Proposed Response Response Status O

CI 45 SC 45.2 P 121 L 21 # 227
 GUPTA, SUJAY Infosys Technologies
 Comment Type T Comment Status D
 Keep a room for mentioning the error counter size.(can be changed later)
 SuggestedRemedy
 This counter is of size 4bytes.
 Proposed Response Response Status O

CI 22 SC 22.7a.2.2 P 34 L 3035 # 228
 GUPTA, SUJAY Infosys Technologies
 Comment Type T Comment Status D
 Suggesting timer name change;
 SuggestedRemedy
 Call li_timer -> lp_intimer
 and tw_timer -> lp_outtimer, the term tw is overloaded.
 Proposed Response Response Status O

CI 22 SC 22.7 P 34 L 7 # 229
 GUPTA, SUJAY Infosys Technologies
 Comment Type E Comment Status D
 Need a figure for logical location of the LPI SM, which layer it interfaces. Can be mentioned in figure 22-20a, page 33.
 SuggestedRemedy
 Proposed Response Response Status O

CI 24 SC 24.3 P 51 L 6 # 230
 GUPTA, SUJAY Infosys Technologies
 Comment Type E Comment Status D
 It should be "PMA_LPILINKFAIL.request" instead of PMA_LPILINK.request primitive.
 SuggestedRemedy
 Proposed Response Response Status O

CI 14 SC 14.1 P 19 L 23 # 231
 GUPTA, SUJAY Infosys Technologies
 Comment Type E Comment Status D
 The section talks about MAU, so the keyword maybe removed as it is understood.
 SuggestedRemedy
 j) Provides for operation with reduced transmit amplitude for a type 10BASE-Te (optional).
 Proposed Response Response Status O

CI 22 SC 22.2 P 29 L 12 # 232
 GUPTA, SUJAY Infosys Technologies
 Comment Type E Comment Status D
 In Carrier_Status is dependent independently on the basic MII CRS plus our new addition the LPI SM. Recommending to change the language clause.
 The CARRIER_STATUS parameter can take one of two values: CARRIER_ON or CARRIER_OFF. The values CARRIER_ON and CARRIER_OFF are derived from the MII signal CRS and from the transmit LPI state machine.
 SuggestedRemedy
 The CARRIER_STATUS parameter can take one of two values: CARRIER_ON or CARRIER_OFF. The values CARRIER_ON and CARRIER_OFF can be derived from the MII signal CRS and also from the transmit LPI state machine.
 Proposed Response Response Status O

CI 24 SC 24.2.2.5 P 43 L 22 # 243
 Bennett, Michael LBNL
 Comment Type TR Comment Status D
 The values in Table 24-2 do not match the values in table 78-2
 SuggestedRemedy
 according to slide 12 in chou_02_0708.pdf, which was adopted as a baseline, the values in 78-2 are correct. Make the tables consistent
 Proposed Response Response Status O

Comments

IEEE P802.3az D1.3 Energy Efficient Ethernet comments

May 2009

Cl 00 SC 0 P L # 244
 Diab, Wael Broadcom
 Comment Type E Comment Status D
 Revision history is inconsistant and inaccurate across draft
 SuggestedRemedy
 Suggest having consistency or deleting altogether
 Proposed Response Response Status O

Cl 78 SC 78.4 P L # 248
 Diab, Wael Broadcom
 Comment Type TR Comment Status D
 Pls make the changes to support fallback mode
 SuggestedRemedy
 See presentation diab_vetteth_01_0409.pdf
 Proposed Response Response Status O

Cl 01 SC 1.5 P 16 L 8 # 245
 Diab, Wael Broadcom
 Comment Type E Comment Status D
 There seems to be a heading issue. Section 1.1 appears under 1.5
 SuggestedRemedy
 Delete 1.1
 Proposed Response Response Status O

Cl 99 SC P 7 L 16 # 249
 Diab, Wael Broadcom
 Comment Type E Comment Status D
 Suggest that all clause editors and other TF officers are listed
 SuggestedRemedy
 Per comment
 Proposed Response Response Status O

Cl 01 SC 1.5 P 16 L 12 # 246
 Diab, Wael Broadcom
 Comment Type E Comment Status D
 This section is intended to be an expansion of abbreviations, not an explanation
 SuggestedRemedy
 Delte the words "label to indicate" and the " "
 Proposed Response Response Status O

Cl 48 SC 2.3 P 133 L 4 # 250
 Chadha, Mandeep Vitesse Semiconducto
 Comment Type T Comment Status D
 In figure 48-3a, LI is only indicated in Lane 1 and is as such inconsistent with clause 46.3.1.5a and table 46-3 which indicate LI in all the lanes.
 SuggestedRemedy
 Modify figure 48-3a to indicate LI in all the lanes.
 Proposed Response Response Status O

Cl 22 SC P L # 247
 Diab, Wael Broadcom
 Comment Type E Comment Status D
 Several of the cross-refs appear in blue
 SuggestedRemedy
 If this is not intentional, please change back to black
 Proposed Response Response Status O