Comments on D2.3

Cl 45 SC 45.2.1.76a.3 P 116 L 1 # 1
Anslow, Peter
Nortel Networks

Comment Type T

Comment Status D

The title says "LP fast retrain count (1.147.10:6)" but the bits should be "(1.147.15:11)"

SuggestedRemedy

In the title of 45.2.1.76a.3 change "(1.147.10:6)" to "(1.147.15:11)"

Proposed Response

Response Status O

Cl 46 SC 46.3.4 P 137 L 46 # 4
Anslow, Peter
Nortel Networks

Comment Type E

Comment Status D

The editing instruction says "Insert text into the second paragraph of 46.3.4 as follows:" but the heading below is 46.3.3.

In the base standard Link fault signaling is 46.3.4

SuggestedRemedy

change heading to 46.3.4

Proposed Response

Response Status O

Cl 47 SC 47.1 P 142 L 11 # 5
Anslow, Peter
Nortel Networks

Comment Type T

Comment Status X

This says "Transition to the low power state is enabled by register 4.0.9 (for a PHY XS) or 5.20.0 (for a DTE XS). This should be "or 5.0.9 (for a DTE XS)"

SuggestedRemedy

Change "or 5.20.0 (for a DTE XS)" to "or 5.0.9 (for a DTE XS)"

Proposed Response

Response Status O

Cl 55 SC 55.4.2.2 P 207 L 14 # 6
Anslow, Peter
Nortel Networks

Comment Type E

Comment Status D

The editing instruction is "Insert the following text after the existing text in 55.4.2.2 PMA Transmit function:" Since this is all inserted text it should not be shown in underline font.

SuggestedRemedy

Remove the underline from the second and third sentences

Proposed Response

Response Status O
Cl 55  SC 55.4.2.2.2  P208  L 26  # 7
Anslow, Peter  
Nortel Networks

Comment Type  T  Comment Status  D
The editing instruction says "Insert the following text after subclause 55.4.2.2.1 in draft 2.2" which is inappropriate as this is an amendment to IEEE 802.3-2008

SuggestedRemedy
Delete this editing instruction and change the previous one from "Insert a new clause 55.4.2.2.1 after the existing text in 55.4.2.2 PMA Transmit function as shown below:" to "Insert new subclauses 55.4.2.2.1 and 55.4.2.2.2 after the existing text in 55.4.2.2 PMA Transmit function as shown below."

Proposed Response  Response Status  O

Cl 55  SC 55.4.2.5.15  P209  L 48  # 8
Anslow, Peter  
Nortel Networks

Comment Type  E  Comment Status  D
This refers to "Figure 55-27bb" which should be "Figure 55-27b"

SuggestedRemedy
Change "Figure 55-27bb" to "Figure 55-27b"
Similar issue with "Figure 55–16ab" Page 210 line 30

Proposed Response  Response Status  O

Cl 55  SC 55.4.6.4  P217  L 1  # 9
Anslow, Peter  
Nortel Networks

Comment Type  E  Comment Status  D
The editing instruction to insert subclause 55.4.6.4 should appear before the heading for 55.4.6.4. Also, "after subclause 55.3.6.3" should be "after subclause 55.4.6.3"
Same issues for 55.4.6.5

SuggestedRemedy
Move the editing instruction before the heading and change "after subclause 55.3.6.3" to "after subclause 55.4.6.3". Move the editing instruction for 55.4.6.5 before the heading and change "after subclause 55.3.6.4" to "after subclause 55.4.6.4."

Proposed Response  Response Status  O
Comments on D2.3

IEEE P802.3az Energy Efficient Ethernet comments

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Cl 71 SC 71.7.2 P234 L1  # 13
Anslow, Peter Nortel Networks

Comment Type  T  Comment Status  D
There is no editing instruction for 71.7.2, but changes are shown.

SuggestedRemedy
Add an editing instruction

Proposed Response  Response Status  O

Cl 72 SC 72.6.4 P237 L29  # 14
Anslow, Peter Nortel Networks

Comment Type  E  Comment Status  D
This says "for 1usec before" 1usec should be "1" followed by the greek letter mu, then "s" with a non-breaking space (Ctrl space) between 1 and mu.

SuggestedRemedy
Change to "1" followed by the greek letter mu, then "s" with a non-breaking space (Ctrl space) between 1 and mu.

Proposed Response  Response Status  O

Cl 78 SC 78.4 P255 L21  # 15
Anslow, Peter Nortel Networks

Comment Type  E  Comment Status  D
This says "that have a fractional usec value shall be rounded up to the nearest integer number in usecs." "usec" and "usecs" are not correct.

SuggestedRemedy
Change to "that have a fractional value shall be rounded up to the nearest integer number in microseconds."

Proposed Response  Response Status  O

Cl 99 SC P4 L43  # 16
Anslow, Peter Nortel Networks

Comment Type  E  Comment Status  D
This says "This amendment add changes required to enable ...". "add" should be "adds"

SuggestedRemedy
Change to "This amendment adds changes ...

Proposed Response  Response Status  O

Cl 72 SC 72.6.11.2.3 P239 L31  # 17
Pillai, Velu Broadcom

Comment Type  T  Comment Status  X
When tx_mode is QUIET or ALERT, the PMD Transmit function may deactivate functional blocks to conserve energy. When tx_mode is DATA, the PMD Transmit function operates normally.

PMD cannot be in energy saving while tx_mode is in ALERT.

SuggestedRemedy
When tx_mode is QUIET, the PMD Transmit function may deactivate functional blocks to conserve energy. When tx_mode is ALERT, the PMD Transmit function is expected to transmit the alert pattern. And when it is DATA, the PMD Transmit function operates normally.

Proposed Response  Response Status  O

Cl 45 SC 45.2.7.13 P130 L23  # 18
Grimwood, Michael Broadcom

Comment Type  T  Comment Status  X
In Table 45-157a, the references to the clause 55 extended next page bits are not correct.

SuggestedRemedy
For 7.60.3, change "U23" to "U24"
For 7.60.2, change "U22" to "U23"
For 7.60.1, change "U21" to "U22"

Proposed Response  Response Status  O
Comments on D2.3

Cl 45 SC 45.2.7.14 P 132 L 24 # 19

Grimwood, Michael Broadcom

Comment Type T Comment Status X

In Table 45-157b, the references to the clause 55 extended next page bits are not correct.

Suggested Remedy

For 7.61.3, change "28.2.3.4.1 / 55.6.1; U3" to "28.2.3.4.1; U3 / 55.6.1; U24"
For 7.61.2, change "28.2.3.4.1 / 55.6.1; U2" to "28.2.3.4.1; U3 / 55.6.1; U23"
For 7.61.1, change "28.2.3.4.1 / 55.6.1; U1" to "28.2.3.4.1; U3 / 55.6.1; U22"

Proposed Response Response Status O

Cl 55 SC 55.4.2.2 P 208 L 35 # 20

Grimwood, Michael Broadcom

Comment Type T Comment Status D

There is a cut-and-paste typo in the description of the link failure signal. Also, clarify that the other pairs transmit quiet (as was done for alert).

Suggested Remedy

"The link failure signal is transmitted on pair A when the PHY operates as a MASTER. The alert signal is transmitted on pair C when the PHY operates as a SLAVE."

To:

"The link failure signal is transmitted on pair A when the PHY operates as a MASTER. The link failure signal is transmitted on pair C when the PHY operates as a SLAVE. All other pairs transmit quiet as described in subclause 55.3.4a."

Proposed Response Response Status O

Cl 47 SC 47.1.6 P 142 L 44 # 22

Brown, Matt Applied Micro (AMCC)

Comment Type E Comment Status D

repeated phrase

Suggested Remedy

change "specified in specified in" to "specified in".

Proposed Response Response Status O
<table>
<thead>
<tr>
<th>Comment ID</th>
<th>Page</th>
<th>Section</th>
<th>Line</th>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Comment</th>
<th>Proposed Response</th>
<th>Response Status</th>
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<tr>
<td>#23</td>
<td>148</td>
<td>48.2.4.2</td>
<td>20</td>
<td>T</td>
<td>D</td>
<td></td>
<td></td>
<td>LPIDLE</td>
</tr>
<tr>
<td>#24</td>
<td>165</td>
<td>49.2.13.2.3</td>
<td>42</td>
<td>E</td>
<td>D</td>
<td>for consistency /LI/ is control character to imply that control bits are set</td>
<td>Change &quot;/LI/ characters&quot; to &quot;/LI/ control characters&quot;.</td>
<td>O</td>
</tr>
<tr>
<td>#25</td>
<td>166</td>
<td>49.2.13.2.3</td>
<td>9</td>
<td>E</td>
<td>D</td>
<td>consistency</td>
<td></td>
<td>O</td>
</tr>
<tr>
<td>#26</td>
<td>149</td>
<td>48.2.6.1.2</td>
<td>30</td>
<td>T</td>
<td>D</td>
<td></td>
<td></td>
<td>LI</td>
</tr>
<tr>
<td>#27</td>
<td>150</td>
<td>48.2.6.1.6</td>
<td>30</td>
<td>T</td>
<td>D</td>
<td>As currently specified for 10GBASE-KX4, when tx_quiet is TRUE the PMD must cease transmission. However, it is optional for the XGXS. Should it also be optional for the 10GBASE-KX4 MDI?</td>
<td>Make it clear in this text that turning off the transmitter is required on 10GBASE-KX4 or consider making QUIET output optional for 10GBASE-KX4.</td>
<td>O</td>
</tr>
<tr>
<td>#28</td>
<td>157</td>
<td>48.2.6.2.5</td>
<td>5</td>
<td>TR</td>
<td>D</td>
<td>Tolerance on TSL and TUL are too tight and will preclude implementations that control EEE through firmware.</td>
<td>Change tolerance from 1% to 1 us.</td>
<td>O</td>
</tr>
</tbody>
</table>

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected  RESPONSE STATUS: O/open  W/written  C/closed  U/unsatisfied  Z/withdrawn
SORT ORDER: Comment ID
Cl  SC  P  L  # Comment Type  Comment Status  Proposed Response

Cl 49 SC 49.2.13.2.2 P166 L40 #29
Brown, Matt  Applied Micro (AMCC)
Comment Type  T  Comment Status  D
Reference to 72.6.5 is not correct for the ALERT signal.
SuggestedRemedy
Change reference to 72.6.2.
Proposed Response  Response Status  O

Cl 49 SC 49.2.6 P162 L2 #30
Brown, Matt  Applied Micro (AMCC)
Comment Type  T  Comment Status  D
Paragraph implies scrambler bypass is perpetually enabled during EEE. Also, this is a really long sentence
SuggestedRemedy
To aid block synchronization in the receiver for EEE capability when Clause 74 FEC is in use, the PCS shall bypass the scrambler when scrambler_bypass is TRUE. During scrambler bypass, the PCS shall pass the unscrambled data from the scrambler input rather than the scrambled data from the scrambler output and the scrambler shall continue to operate normally.
Proposed Response  Response Status  O

Cl 49 SC 49.2.13.3.1 P173 L19 #31
Brown, Matt  Applied Micro (AMCC)
Comment Type  TR  Comment Status  X
Figure 49-17.
Transition from RX_SLEEP to RXQUIET is based upon signal_ok which is implicitly based upon PMA clock lock and PMD energy detect. Since energy_detect is reliable only during the ALERT signal and may be sporadic while a data signal is received, it is possible for transitions to cycle between RX_SLEEP and RXQUIET.
Note also that the signal_ok parameter generated by the PMD (Clause 51) is not explicitly defined. See 51.2.3.
SuggestedRemedy
In section 51.2.3, specify that signal_ok is not to be based upon energy_detect. This clarification may have to be propagated to each PMD.
Proposed Response  Response Status  O

Cl 49 SC 49.2.13.3.1 P174 L18 #33
Brown, Matt  Applied Micro (AMCC)
Comment Type  TR  Comment Status  D
Table 49-2
1% tolerance on TSL, TUL, and TWL precludes firmware implementation.
SuggestedRemedy
Change tolerance to +/-1us.
Proposed Response  Response Status  O

Cl 49 SC 49.2.13.3.1 P174 L42 #34
Brown, Matt  Applied Micro (AMCC)
Comment Type  TR  Comment Status  X
Table 49-3
No tolerance on TWTF.
SuggestedRemedy
Either specify maximum only (this should be okay) or specify minimum of 0.98 us.
Proposed Response  Response Status  O
Comments on D2.3

IEEE P802.3az Energy Efficient Ethernet comments
March 2010

Proposed Response

Cl 51 SC 51 P 177 L 37 # 35
Brown, Matt
Applied Micro (AMCC)

Comment Type E Comment Status D

Figure 51-3

SuggestedRemedy
Add note to indicate that dashed lines are only for PHYs that support EEE.

Proposed Response Response Status O

Cl 51 SC 51 P 177 L 35 # 36
Brown, Matt
Applied Micro (AMCC)

Comment Type ER Comment Status X

Figure 51-3
Show proper EEE service primitives.

SuggestedRemedy
On PMA SI, replace EEE signals with...
PMA_TXMODE.request
PMA_RXMODE.request
PMA_ENERGY.indication

On PMD SI, show...
PMD_TXMODE.request
PMD_RXMODE.request

Proposed Response Response Status O

Cl 51 SC 51.2.4 P 178 L 8 # 37
Brown, Matt
Applied Micro (AMCC)

Comment Type TR Comment Status X

PMA_RXMODE not correctly specified.

SuggestedRemedy
Change section 51.2.4 as follows:
The rx_mode primitive is generated by the PCS receiver process for EEE capability to
indicate the current RX LPI state.

In section 51.2.4.1 change "rx_quiet" to "rx_mode"

Change Section 51.2.4.2 as follows:
This primitive is generated by the PCS.

Change Section 51.2.4.3 as follows:
When received the PMA is configured appropriately for the indicated state and the value is
propagated to PMD_RXMODE.request(rx_mode). When rx_mode is DATA the PMA
operates normally. When rx_mode is QUIET, the PMA may go into a low power mode.

Proposed Response Response Status O

Cl 51 SC 51.2.5 P 178 L 29 # 38
Brown, Matt
Applied Micro (AMCC)

Comment Type TR Comment Status X

PMA_TXMODE not correctly specified.

SuggestedRemedy
Change section 51.2.5 as follows:
The tx_mode primitive is generated by the PCS receiver process for EEE capability to
indicate the current TX LPI state.

Change Section 51.2.5.2 as follows:
This primitive is generated by the PCS.

Change Section 51.2.5.3 as follows:
When received the PMA is configured appropriately for the indicated state and the value is
propagated to PMD_TXMODE.request(tx_mode). When tx_mode is DATA the PMA
operates normally. When tx_mode is QUIET, the PMA may go into a low power mode. When tx_mode is ALERT, the PMA operation is not defined.

Proposed Response Response Status O
energy_detect does not necessarily indicate a good signal when TRUE nor a bad signal when FALSE. Instead TRUE indicates reliable detection of ALERT signal and FALSE means that ALERT signal is reliably not detected.

SuggestedRemedy
Simplify the definition of this parameter in section 51.2.6.1 to indicate simply that it reflects the signal_ok parameters from the PMD SI.

The definition of signal_ok in Clause 72 will have to be modified to clearly state the intended behavior for LPI mode. Another comment is submitted to request this change to sub-clause 72.6.4.

Proposed Response  
Response Status  O

Redundant section 51.4.2. This was to be replace by previous sections.

SuggestedRemedy
Delete section.

Proposed Response  
Response Status  O

Change the definition of lpi_fr_en to:
Set TRUE if 1.147.0 is set to 1 and fast retrain resolved during auto-negotiation (i.e., fast retrain is supported) and is otherwise set to FALSE.

Change the definition of MDIO bit 1.147.0 on page 115 line 40 to:
For PHYs that support fast re-train, this bit maps to lpi_fr_en as defined in 55.4.5.1.

Proposed Response  
Response Status  O
Proposed Response

Cl 55 SC 55.3.4a.1 P194 L9 #43
Brown, Matt 
Applied Micro (AMCC)

Comment Type T Comment Status X
Normal training here refers to training on PHYs that do not support EEE. Now that fast and "not fast" (aka normal) training are supported this phrase needs to be modified.

Suggested Remedy

Change "normal training" to "training without EEE capability".

Proposed Response Response Status O

Cl 55 SC 55.1.3 P183 L25 #44
Brown, Matt 
Applied Micro (AMCC)

Comment Type T Comment Status D
Figure 55-3
rx_lpi_active signal is shown connecting to PCS transmit block, but is not used there.

Suggested Remedy

Delete rx_lpi_active connection to PCS transmit block.

Proposed Response Response Status O

Cl 55 SC 55.1.3 P183 L33 #45
Brown, Matt 
Applied Micro (AMCC)

Comment Type T Comment Status X
Connection of pcs_status to link monitor block is missing. This is required for link monitor state diagram in Figure 55-27. This is an omission in base standard, but is required for proper operation of newly defined fast retrain.

Suggested Remedy

Add connection of pcs_status to link monitor block.

Proposed Response Response Status O

Cl 55 SC 55.3.2.2.9 P191 L1 #49
Brown, Matt 
Applied Micro (AMCC)

Comment Type E Comment Status D
consistent (with clause 49) terminology

Suggested Remedy

Replace "idle and Ip_idle ordered sets" with either "[[I]] and [[LPIDLE]]" or "idle and LPI ordered sets".

Proposed Response Response Status O

Cl 55 SC 55.1.3.3 P184 L15 #46
Brown, Matt 
Applied Micro (AMCC)

Comment Type T Comment Status D
Data frames may be lost if transition out of LPI is due to fast or normal re-train.

Suggested Remedy

Change "during the transition" to "during normal transition".

Proposed Response Response Status O

Cl 55 SC 55.2.2.3.1 P187 L6 #47
Brown, Matt 
Applied Micro (AMCC)

Comment Type E Comment Status D
consistent use of frame periods

Suggested Remedy

Change "LDPC frames" to "LDPC frame periods".

Proposed Response Response Status O

Cl 55 SC 55.2.2.9 P187 L13 #48
Brown, Matt 
Applied Micro (AMCC)

Comment Type E Comment Status D
rx_lpi_active is boolean

Suggested Remedy

Change "rx_lpi_active is ACTIVE" to "rx_lpi_is is TRUE".

Proposed Response Response Status O
<table>
<thead>
<tr>
<th>Comment ID</th>
<th>P55 SC</th>
<th>Paragraph</th>
<th>Line</th>
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<tr>
<td>50</td>
<td>55</td>
<td>182</td>
<td>0</td>
<td>E</td>
<td>D</td>
<td>Consistent terminology for LPI control characters. Use either &quot;LI&quot; or &quot;LPI control characters&quot;. Suggested Remedy: page 184 line 36 replace &quot;LP_IDLE characters&quot; with &quot;LPI control characters&quot;. line 10 replace &quot;Low power idle control&quot; with &quot;Low power idle (LPI) control&quot; line 11 replace &quot;LPI characters&quot; with &quot;LPI control characters&quot; line 41 replace &quot;LP_IDLE characters&quot; with &quot;LPI control characters&quot; page 192 line 12 replace &quot;LP_IDLE codewords&quot; with &quot;LPI control characters&quot; line 19 replace &quot;LP_IDLE&quot; with &quot;LPI&quot; page 193 line 15 replace &quot;LP_IDLE&quot; with &quot;LPI control&quot; Consider generally replacing &quot;LPI control characters&quot; globally and above with &quot;LI&quot; or &quot;LI/characters&quot;. Proposed Response:</td>
</tr>
<tr>
<td>51</td>
<td>55</td>
<td>193</td>
<td>13</td>
<td>T</td>
<td>X</td>
<td>pcs_status is not set by PHY control state diagram nor is pcs_status=OK criteria for permitting transitions to LPI Suggested Remedy: Change: &quot;after PCS_status is set to OK.&quot; To either &quot;when the PHY has successfully completed training and is in the PCS_Data state in the PHY Control State Diagram.&quot; or &quot;when the PHY has successfully completed training and loc_lpi_en is TRUE.&quot; Proposed Response:</td>
</tr>
<tr>
<td>52</td>
<td>55</td>
<td>193</td>
<td>44</td>
<td>E</td>
<td>D</td>
<td>text error Suggested Remedy: Change &quot;transmit signal&quot; to &quot;transmitter&quot;. Proposed Response:</td>
</tr>
<tr>
<td>53</td>
<td>55</td>
<td>199</td>
<td>16</td>
<td>T</td>
<td>D</td>
<td>Now that the definition for the alert_detect variable has been changed, it has a different meaning from the alert_detect primitive from the PMA. Change the name to differentiate and modify definition appropriately. Suggested Remedy: change variable alert_detect to pcs_alert_detect and/or change the name of the PMA primitive alert_detect to pma_alert_detect appropriately rename all instances of alert_detect in Clause 55 to reflect new names Proposed Response:</td>
</tr>
</tbody>
</table>

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn SORT ORDER: Comment ID
Proposed Response

Change "low power mode" to "LPI mode".

Suggested Remedy

Proposed Response

Change two instances of "vector" to "variable".

Suggested Remedy

Proposed Response

the transition to PMA_Training_Init_S is not specified in any way by 55.3.4a.1.

Suggested Remedy

Remove the amendment or clarify the connection with 55.3.4a.1.

Proposed Response
Cl 55 SC 55.4.2.5.15 P 209 L 48 # 59
Brown, Matt
Applied Micro (AMCC)
Comment Type E
Comment Status D
text error
SuggestedRemedy
Change 55-27bb to 55-27b.
Proposed Response
Response Status O

Cl 55 SC 55.4.6.1 P 213 L 31 # 52
Brown, Matt
Applied Micro (AMCC)
Comment Type T
Comment Status X
During a fast re-train, a new PBO is not exchanged, so PBO_next is not defined.
SuggestedRemedy
Provide definition for PBO_next for fast retrain or otherwise resolve.
Proposed Response
Response Status O

Cl 55 SC 55.4.2.5.15 P 209 L 49 # 60
Brown, Matt
Applied Micro (AMCC)
Comment Type T
Comment Status X
link failure signal is not defined in this section
SuggestedRemedy
Change "This causes the transmission of an easily-detected link failure signal." to "This causes the transmission of the link failure signal specified in 55.4.2.2.2."
Proposed Response
Response Status O

Cl 55 SC 55.4.6.1 P 213 L 31 # 53
Brown, Matt
Applied Micro (AMCC)
Comment Type T
Comment Status D
The recommendation is valid only in ACTIVE not LPI mode.
SuggestedRemedy
Append last sentence with "when received while not in LPI mode.".
Proposed Response
Response Status O

Cl 55 SC 55.4.2.4 P 209 L 16 # 54
Brown, Matt
Applied Micro (AMCC)
Comment Type T
Comment Status X
The recommendation is valid only in ACTIVE not LPI mode.
SuggestedRemedy
Append last sentence with "when received while not in LPI mode.".
Proposed Response
Response Status O

Cl 72 SC 72.6.2 P 237 L 11 # 64
Brown, Matt
Applied Micro (AMCC)
Comment Type TR
Comment Status X
The intent of the ALERT signal is to provide a signal that permits reliable discrimination from noise. In addition to setting the pattern to repeating 0xFF00, disable equalization and set to maximum swing.
SuggestedRemedy
Add the following text: When tx_mode is ALERT, transmitter equalization is disabled and the amplitude is set to maximum. This setting is equivalent to the PRESET state specified in 72.6.10.3.4. When tx_mode is DATA, the driver coefficients are restored to their states resolved during training.
Proposed Response
Response Status O
Comments on D2.3

Proposed Response

PMD service primitives PMD_RX_MODE and PMD_TX_MODE are not specified.

Suggested Remedy
Move from section 72.6.10 to 72.2.

Proposed Response

PMD_SIGNAL.indication as specified in 52.1.1 is not applicable to Clause 72 as it is specified for optical interfaces. Also, the signal detection function has unique characteristics in LPI mode.

Suggested Remedy
Fully specify PMD_SIGNAL.indication within Clause 72 and refer to signal detection function in 72.6.4.

Proposed Response

change "low power mode" to "LPI mode"

Proposed Response

72.6.11 is the PMD SI specification. Contents should be moved to 72.2.

Suggested Remedy
Move contents of 72.6.11 to 72.2.
### Comments on D2.3

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<thead>
<tr>
<th>Comment ID</th>
<th>Page</th>
<th>Line</th>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Suggested Remedy</th>
<th>Proposed Response</th>
<th>Response Status</th>
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<tr>
<td>71</td>
<td>238</td>
<td>21</td>
<td>E</td>
<td>D</td>
<td>change &quot;requests to transitions in&quot; to &quot;requests for transition in&quot;</td>
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**Comment ID 72**  
**SC 72.6.11.1.2**  
**P 239**  
**L 5**  
Brown, Matt  
Applied Micro (AMCC)

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<th>Comment Status</th>
<th>Suggested Remedy</th>
<th>Proposed Response</th>
<th>Response Status</th>
</tr>
</thead>
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| E            | D              | Change definition to ...  
Generated in LPI mode and the receiver mode changes from QUIET to DATA or vice versa. | | O               |

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<th>Comment ID 73</th>
<th>Page</th>
<th>Line</th>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Suggested Remedy</th>
<th>Proposed Response</th>
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</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>238</td>
<td>35</td>
<td>T</td>
<td>X</td>
<td>Text descriptors need to be corrected. This paragraph is not required in PMD definition so it should be deleted, not fixed.</td>
<td></td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
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<th>Page</th>
<th>Line</th>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Suggested Remedy</th>
<th>Proposed Response</th>
<th>Response Status</th>
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</table>
| 74            | 239  | 5    | E            | X              | Change definition to ...  
Generated in LPI mode and the receiver mode changes from QUIET to DATA or vice versa. | | O               |

<table>
<thead>
<tr>
<th>Comment ID 75</th>
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<tr>
<td>75</td>
<td>239</td>
<td>16</td>
<td>E</td>
<td>D</td>
<td>Change &quot;LPI mode is not implemented&quot; to &quot;EEE is not supported&quot;.</td>
<td></td>
<td>O</td>
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<th>Comment Type</th>
<th>Comment Status</th>
<th>Suggested Remedy</th>
<th>Proposed Response</th>
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</thead>
</table>
| 76            | 239  | 16   | E            | D              | text does not power down when tx_mode is ALERT  
"When tx_mode is QUIET, the PMD transmit function may deactivate functional blocks to conserve energy. When tx_mode is DATA or ALERT, the PMD transmit function operates normally." | | O               |

**TYPE:** TR/technical required  
**ER/editorial required**  
**GR/general required**  
**T/technical**  
**E/editorial**  
**G/general**  

**COMMENT STATUS:** D/dispatched  
A/accepted  
R/rejected  
**RESPONSE STATUS:** O/open  
W/written  
C/closed  
U/unsatisfied  
Z/withdrawn  

**SORT ORDER:** Comment ID
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Horner, Rita
Avago Technologies

**Comment Type:** TR/technical

There is no way for a FEC enabled design to achieve rx_block_lock since the FEC Scrambler is always active. Disabling the scrambler in Clause 49 feeds constant data to the FEC, but the FEC's data scrambler (pn-2112) will scramble the data preventing a constant, predictable pattern from being transmitted.

**Suggested Remedy:**
1) Add scrambler bypass in the FEC mode by changing Figure 74-5 in clause 74 to match the changes that were added to Figure 49-5 for EEE, this reflects the scrambler bypass mode option.
2) Change the existing D2.3 references to scrambler_bypass to scrambler_bypass_tx (sections 49.2.13.2.2 Variables and 49.2.13.3 State diagrams i.e. Figure 49-16)
3) Create a new entry for scrambler_bypass_rx in the section 49.2.13.2.2 Variables
4) And insert the following in the state diagram in Figure 49-17:

**Proposed Response**

```
RX_SLEEP
rx_lpi_active <= true
scrambler_bypass_rx <= false
start rx_tq_timer

RX_WAKE
rx_mode <= DATA
scrambler_bypass_rx <= scr_bypass_enable
start rx_rw_timer

RX_WTF
scrambler_bypass_rx = scr_bypass_enable
start rx_wf_timer
```

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Horner, Rita
Avago Technologies

**Comment Type:** TR/technical

The conversion of LPI control code (lp_idle) for 10GBASE-R from 0x07 (that had been set ever since Pre D1.0 and all the way until D2.2) to 0x06 is impacting multiple ICs that are in production. This change of lp_idle to 0x06 will cause error conditions and will not allow interoperability with existing products. There are no other character types such as start, terminate, etc. that have matching codes, why there needs to be a last minutes change of control code that is impacting many IC interoper capabilities.

**Suggested Remedy:**

Switch back to the original lp_idle=0x07

**Proposed Response**

```
```

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Horner, Rita
Avago Technologies

**Comment Type:** TR/technical

The receive state machine is not controlling the state of signals on the GMII during LPI. The signals must be set to the values defined in Table 35.2.

**Suggested Remedy:**

Insert actions:

- receiving <= FALSE
- RXD<7:0> <= 0000 0001
- RX_DV <= FALSE
- RX_ER <= TRUE

Into state RX_SLEEP on p.83, l.6

**Proposed Response**

```
```

**Response Status:** O

Late

**Comment Type:** TR/technical

The conversion of LPI control code (lp_idle) for 10GBASE-R from 0x07 (that had been set ever since Pre D1.0 and all the way until D2.2) to 0x06 is impacting multiple ICs that are in production. This change of lp_idle to 0x06 will cause error conditions and will not allow interoperability with existing products. There are no other character types such as start, terminate, etc. that have matching codes, why there needs to be a last minutes change of control code that is impacting many IC interoper capabilities.

**Suggested Remedy:**

Switch back to the original lp_idle=0x07

**Proposed Response**

```
```

**Response Status:** O