<table>
<thead>
<tr>
<th>Cl</th>
<th>SC</th>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Proposed Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>36.2.5.2.2</td>
<td>TR</td>
<td>D</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Suggested Remedy:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Insert actions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>receiving &lt;= FALSE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RXD&lt;7:0&gt; &lt;= 0000 0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RX_DV &lt;= FALSE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RX_ER &lt;= TRUE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Into state RX_SLEEP on p.83, l.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Proposed Response:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PROPOSED ACCEPT.</td>
</tr>
<tr>
<td>45</td>
<td>45.2.1.76a.1</td>
<td>T</td>
<td>D</td>
<td>As defined bit 1.147.0 determines whether fast retrain is enabled or not via the lpi_fr_en variable. However, the lpi_fr_en is to be set based on the result of auto-negotiation not explicit configuration by station manager. AN will enable fast re-train if the local (7.32.1) and the received (7.33.1) fast re-train ability are both equal to 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The intent of this bit was to enable the station manager disable fast retrain if it had been enabled by auto-negotiation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Make it clear that this bit enables fast re-train only for PHYs which support fast re-train. In other, the bit can enable fast retrain only if auto-negotiation has enabled fast retrain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Suggested Remedy:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For PHYs that support fast re-train, this bit maps to lpi_fr_en as defined in 55.4.5.1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Also, change the definition of lpi_fr_en on page 211 line 25 to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Set TRUE if 1.147.0 is set to 1 and fast retrain resolved during auto-negotiation (i.e., fast re-train is supported), otherwise set FALSE.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Proposed Response:</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>PROPOSED ACCEPT IN PRINCIPLE.</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;This bit maps to lpi_fr_en as defined in 55.4.5.1.&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;For PHYs that support fast re-train, this bit maps to lpi_fr_en as defined in 55.4.5.1.&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Make change in Clause 55 as suggested.</td>
</tr>
</tbody>
</table>
There are two headings 45.2.4.1.3a. The second one should be 45.2.4.1.3b.

Suggested Remedy
Change the second instance of 45.2.4.1.3a to 45.2.4.1.3b.

PROPOSED ACCEPT.

There are two headings 45.2.5.1.3a. The second one should be 45.2.5.1.3b.

Suggested Remedy
Change the second instance of 45.2.5.1.3a to 45.2.5.1.3b.

PROPOSED ACCEPT.

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

Suggested Remedy
For 7.60.3, change "28.2.3.4.1 / 55.6.1; U23" to "28.2.3.4.1; U24"
For 7.60.2, change "28.2.3.4.1 / 55.6.1; U2" to "28.2.3.4.1; U23"
For 7.60.1, change "28.2.3.4.1 / 55.6.1; U1" to "28.2.3.4.1; U22"

PROPOSED ACCEPT.

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

Suggested Remedy
Change heading to 46.3.4.

PROPOSED ACCEPT.

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

Suggested Remedy
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 ACCEPT.
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 W
PROPOSED ACCEPT.

Cl 47 SC 48.2.4.2 P 148 L 20 # 23
Brown, Matt Applied Micro (AMCC)

Comment Type T Comment Status D
||LPIDLE|| and ||I|| are mutually exclusive, ||LPIDLE|| is not a special case of ||I||.

Suggested Remedy
Change the first sentence as follows:
||LPIDLE|| is coded in the same manner as ||I|| except that the /20.5/ code group replaces one code group in each ||K|| and ||R|| (not ||A||) column with a random uniform distribution across the lanes.

Proposed Response Response Status W
PROPOSED REJECT.

This is a change to unmodified text hence the comment is out of scope.

The clarity of the text could be increased with a simpler change than in the suggested remedy by changing:
"The LPI ordered set ||LPIDLE|| is a special case of ||I|| .."

to:
"The LPI ordered set ||LPIDLE|| is a modification of ||I|| .."

Cl 47 SC 49.2.13.2.3 P 166 L 9 # 25
Brown, Matt Applied Micro (AMCC)

Comment Type E Comment Status D
consistency

Suggested Remedy
Change "EEE capability is implemented" to "EEE capability is supported".
and
Change "EEE capability is not implemented" to "EEE capability is not supported".

Proposed Response Response Status W
PROPOSED REJECT.
This is a change to unmodified text hence the comment is out of scope.

Cl 48 SC 48.2.6.1.2 P 149 L 30 # 26
Brown, Matt Applied Micro (AMCC)

Comment Type E Comment Status D
||LI|| is never used in this section, except to define ||LPIDLE||. Why are there two labels for the LPI ordered set?

Suggested Remedy
Rename ||LI|| to ||LPIDLE|| and delete current definition for ||LPIDLE||.

Proposed Response Response Status W
PROPOSED REJECT.

The text is clear as is and the comment is on unchanged text.

Cl 48 SC 48.2.6.1.6 P 150 L 30 # 27
Brown, Matt Applied Micro (AMCC)

Comment Type T Comment Status D
||LI|| is never used in this section, except to define ||LPIDLE||. Why are there two labels for the LPI ordered set?

Suggested Remedy
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?

Suggested Remedy
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.

Proposed Response Response Status W
PROPOSED REJECT.

Comment is on unchanged text and hence out of scope.
Proposed responses: D2.3

Cl 48 SC 48.2.6.2.5 P157 L5 #28
Brown, Matt Applied Micro (AMCC)

Comment Type TR Comment Status D
Tolerance on TSL and TUL are too tight and will preclude implementations that control EEE through firmware.

SuggestedRemedy
Change tolerance from 1% to 1 us.

Proposed Response Response Status W
PROPOSED REJECT.

The tolerance of 1% was set by the consensus of the task force.

Cl 49 SC 49.2.13.3.1 P173 L19 #51
Brown, Matt Applied Micro (AMCC)

Comment Type TR Comment Status D

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 W
PROPOSED ACCEPT.

Cl 49 SC 49.2.13.3.1 P172 L36 #32
Brown, Matt Applied Micro (AMCC)

Comment Type TR Comment Status D
Figure 49-16. Must start 1us time in TX_REF_SCR_BYPASS

SuggestedRemedy
In TX_REF_SCR_BYPASS add line...
"Start one_us_timer"

Proposed Response Response Status W
PROPOSED ACCEPT.

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 W
PROPOSED REJECT.

The tolerance of 1% was set by the consensus of the task force.
IEEE P802.3az Energy Efficient Ethernet comments

Proposed responses: D2.3

March 2010

**Comment** 49 SC 49.2.13.3.1 P174 L42 #54
Brown, Matt Applied Micro (AMCC)

**Comment Type** TR  **Comment Status** D
Table 49-3
No tolerance on TWTF.

**Suggested Remedy**
Either specify maximum only (this should be okay) or specify minimum of 0.98 us.

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

**Comment** 49 SC 49.2.4.7 P161 L7 #78
Horner, Rita Avago Technologies

**Comment Type** TR  **Comment Status** D
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 interop capabilities.

**Suggested Remedy**
Switch back to the original lp_idle=0x07

**Proposed Response**  **Response Status** W
PROPOSED REJECT.

The text is quite clear as is.

**Comment** 49 SC 49.2.6 P162 L2 #50
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

**Suggested Remedy**
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** W
PROPOSED REJECT.

This change was made as per resolution of comments #187, #181, and #128 on D2.1

It was also agreed to in the resolution of comments #130 and #466 on D2.0. This was for consistency between Clause 49 and Clause 55.
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 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 Variables

4) And insert the following in the state diagram in Figure 49-17:

   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

PROPOSED REJECT.

The FEC uses a simple, cyclic scrambler so the receiver should be able to achieve lock rapidly.

There is no way to utilize a receive scrambler bypass in the receive state diagram as the receiver has no way to synchronize the bypass behavior with the link partner's transmit state diagram.

The "(optional)" makes this clear so this change is not essential and could be deferred.
### IEEE P802.3az Energy Efficient Ethernet comments

**Proposed responses:** D2.3  March 2010

<table>
<thead>
<tr>
<th>Cl</th>
<th>SC 51.2.4</th>
<th>P 178</th>
<th>L 8</th>
<th># 37</th>
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<tr>
<td>Brown, Matt</td>
<td>Applied Micro (AMCC)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**PMA_RXMODE not correctly specified.**

**Suggested Remedy**

- 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**

PROPOSED ACCEPT IN PRINCIPLE.

- **Change 51.2.4:**
  - This primitive is generated by the PCS Receive Process for EEE capability to indicate that the PMA and PMD receive functions may go into a low power mode, see 49.3.6.6. Without EEE capability, the primitive is never invoked and the PMA behaves as if `rx_mode` = DATA.

  In section 51.2.4.1 change "rx_quiet" to "rx_mode"

- **Change 51.2.4.2:**
  - The PCS generates this primitive to indicate the low power mode of the receive path.

- **Change 51.2.4.3:**
  - 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.

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<thead>
<tr>
<th>Cl</th>
<th>SC 51.2.5</th>
<th>P 178</th>
<th>L 29</th>
<th># 38</th>
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<tbody>
<tr>
<td>Brown, Matt</td>
<td>Applied Micro (AMCC)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**PMA_TXMODE not correctly specified.**

**Suggested Remedy**

- 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.

**Proposed Response**

PROPOSED ACCEPT IN PRINCIPLE.

- **Change 51.2.5:**
  - This primitive is generated by the PCS Transmit Process for EEE capability to indicate that the PMA and PMD transmit functions may go into a low power mode and to disable the PMD transmitter, see 49.3.6.6. Without EEE capability, the primitive is never invoked and the PMA behaves as if `tx_mode` = DATA.

  Change 51.2.5.2:
  - The PCS generates this primitive to indicate the low power mode of the transmit path.

  Change 51.2.5.3:
  - 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.
Redundant section 51.4.2. This was to be replace by previous sections.

Suggested Remedy
Delete section.

PROPOSED REJECT.

These signals need to be added to the XSBI interface & therefore must be added in 51.4.2.

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.

Suggested Remedy
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.

This section defines the variables that are required for EEE. The service interface that passes the values of the variables is defined in 51.2. This structure mirrors the definitions already in the clause for XSBI and the mapping to the PMA SI.

The definition for the PMD SI is in the PMD clauses.
Proposed responses: D2.3

IEEE P802.3az Energy Efficient Ethernet comments

March 2010

Cl 55 SC 0 P182 L 0 # 50
Brown, Matt Applied Micro (AMCC)

Comment Type E Comment Status D
Consistent terminology for LPI control characters.
Use either "/LI/" or "LPI control characters".

Suggested Remedy
page 184
line 36 replace "LP_IDLE characters" with "LPI control characters"
line 191
page 185
line 10 replace "Low power idle control" with "LPI control" line 11 replace "LPI characters" with "LPI control characters"
line 41 replace "LP_IDLE characters" with "LPI control characters"
line 192
line 12 replace "LP Idle codewords" with "LPI control characters"
line 19 replace "LP_IDLE" with "LPI"
line 193
line 15 replace "LP_IDLE" with "LPI control"

Consider generally replacing "LPI control characters" globally and above with "/LI/" or "LI/" characters".

Proposed Response Response Status W
PROPOSED REJECT.

Comment does not fix anything that is broken. Editor will revisit consistency in the Sponsor ballot cycle

Cl 55 SC 55.1.3 P183 L 33 # 45
Brown, Matt Applied Micro (AMCC)

Comment Type T Comment Status D
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 W
PROPOSED ACCEPT.

Cl 55 SC 55.1.3.3 P184 L 15 # 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 W
PROPOSED REJECT.

What may happen during an abnormal transition does not need to be called out

Cl 55 SC 55.12.2 P221 L 13 # 1
Anslow, Peter Nortel Networks

Comment Type E Comment Status D
Both new rows use the "insert" editing instruction, so don't need to be in underline font

Suggested Remedy
Remove underline from *FR row

Proposed Response Response Status W
PROPOSED ACCEPT.

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: Clause, Subclause, page, line
<table>
<thead>
<tr>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Suggested Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>D</td>
<td>Remove underline from all rows in this subclause. Scrub the rest of the draft for similar instances of text added with the <em>insert</em> instruction which is shown with underline font.</td>
</tr>
<tr>
<td>T</td>
<td>D</td>
<td>Change &quot;pcs_status=OK is not criteria for permitting transitions to LPI&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;</td>
</tr>
</tbody>
</table>

Proposed Response: Change the table by adding new rows.

Proposed Response: consistent use of frame periods

Suggested Remedy: Change "LDPC frames" to "LDPC frame periods".

Proposed Response: "Time equal to 4 LDPC frames" is no different from "Time equal to 4 LDPC frame periods"

Comment does not fix anything that is broken. Editor will revisit consistency in the Sponsor ballot cycle.

Proposed Response: change to "rx_lpi_active is TRUE".

Proposed Response: "lpi_idle ordered sets" with either "||I|| and ||LPI||" or "idle and LPI ordered sets".

Proposed Response: PROPOSED ACCEPT IN PRINCIPLE.
Proposed responses: D2.3

IEEE P802.3az Energy Efficient Ethernet comments

March 2010

Cl 55 SC 55.3.4a P 193 L 13 # 51
Brown, Matt Applied Micro (AMCC)

Comment Type T Comment Status D

pcs_status is not set by PHY control state diagram nor is pcs_status=OK criteria for permitting transitions to LPI

Suggested Remedy
Change:
"after PCS_status is set to OK by the PHY Control state diagram."
To either
"when the PHY has successfully completed training and is in the PCS_Data state in the PHY Control State Diagram."
or
"when the PHY has successfully completed training and loc_lpi_en is TRUE."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

"when the PHY has successfully completed training and loc_lpi_en is TRUE."

Cl 55 SC 55.3.4a P 194 L 16 # 53
Brown, Matt Applied Micro (AMCC)

Comment Type E Comment Status D
text error

Suggested Remedy
Change "transmit signal" to "transmitter".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 55 SC 55.3.4a.1 P 194 L 19 # 54
Brown, Matt Applied Micro (AMCC)

Comment Type T Comment Status D

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 W

PROPOSED ACCEPT.

Cl 55 SC 55.3.4a.3 P 196 L 28 # 54
Brown, Matt Applied Micro (AMCC)

Comment Type T Comment Status D

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 Response Status W

PROPOSED REJECT.

Editor believes that though the text could be improved, the intent is clear.

Editor will revisit the issue in the Sponsor ballot cycle.

Cl 55 SC 55.3.4a.3 P 197 L 42 # 56
Brown, Matt Applied Micro (AMCC)

Comment Type E Comment Status D
tx_active_pair is a variable not a vector

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

Proposed Response Response Status W

PROPOSED ACCEPT.

Change 'vector' to 'variable' in two locations on line 42.

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: Clause, Subclause, page, line

Cl 55 SC 55.3.4a.3 3/12/2010 12:44:35 PM

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<table>
<thead>
<tr>
<th>Comment Type</th>
<th>Comment Status</th>
<th>Proposed Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>D</td>
<td>The RX_WE state was to set the value of two variables and immediately transition to the RX_E state. However, by convention, the transition to RX_E may not occur until the next 64B/65B block is received. 802.3-2008 Section 4 55.3.5.4 on page 484 says that there is &quot;exactly one transition for each receive block processed&quot;. This means that without specifying otherwise, the RX_WE state persists for one block cycle and one block of data is ignored.</td>
</tr>
<tr>
<td>E</td>
<td>D</td>
<td>The editing instruction is &quot;Insert the following text after the existing text in 55.4.2.2 PMA Transmit function,&quot; since this is all inserted text it should not be shown in underline font. Remove the underline from the second and third sentences</td>
</tr>
<tr>
<td>T</td>
<td>D</td>
<td>The recommendation is valid only in ACTIVE not LPI mode. Append last sentence with &quot;when received while not in LPI mode.&quot;</td>
</tr>
</tbody>
</table>

**Suggested Remedy**

- For the RX_WE state transition: "The 64B/65B Receive state diagram shown in Figure 55-16 controls the decoding of 65B received blocks. It makes exactly one transition for each receive block processed," and amend as follows: "The 64B/65B Receive state diagram shown in Figure 55-16 controls the decoding of 65B received blocks. It makes exactly one transition for each receive block processed except for the transition from RX_WE to RX_E which occurs immediately after the RX_WE processes are complete." |

- For the edit description: "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." |

- For the recommendation: "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."
Brown, Matt  Applied Micro (AMCC)

Comment Type  T  Comment Status  D

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  Response Status  W

PROPOSED REJECT.

From 55.3.4a.1.

'When both PHYs support the EEE capability, the slave PHY is responsible for
synchronizing its PMA training frame to the master’s PMA training frame during the transition to PMA_Training_Init_S. The
slave shall ensure that its PMA training frames are synchronized to the master’s PMA training frames within 1 LDPC
frame, measured at the slave MDI on pair A.'

Brown, Matt  Applied Micro (AMCC)

Comment Type  E  Comment Status  D

text error

Suggested Remedy

Change 55-27bb to 55-27b.

Proposed Response  Response Status  W

PROPOSED ACCEPT.

Anslow, Peter  Nortel Networks

Comment Type  T  Comment Status  D

This refers to "Figure 55-27bb" which should be "Figure 55-27b"

Suggested Remedy

Change "Figure 55-27bb" to "Figure 55-27b"

Proposed Response  Response Status  W

PROPOSED ACCEPT.

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: Clause, Subclause, page, line

Cl  55  SC  55.4.2.5.15  P  209  L  49  #  58

Cl  55  SC  55.4.2.5.15  P  209  L  48  #  59

Cl  55  SC  55.4.2.5.15  P  209  L  50  #  60
IEEE P802.3az Energy Efficient Ethernet comments

Cl 55 SC 55.4.5.1 P 211 L 25 # 42
Brown, Matt
Applied Micro (AMCC)

Comment Type T

Comment Status D

Ipi_fr_en should be TRUE only if 1.147.0 is 1 and fast retrain was resolved during autonegotiation and FALSE otherwise.

Suggested Remedy

Change the definition of Ipi_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 Ipi_fr_en as defined in 55.4.5.1.

Proposed Response

Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

'This variable is set to TRUE if 1.147.0 is set to 1 and fast retrain is supported. This variable is set to FALSE otherwise.'

Cl 55 SC 55.4.6.1 P 213 L 31 # 61
Brown, Matt
Applied Micro (AMCC)

Comment Type TR

Comment Status D

During a fast re-train, a new PBO is not exchanged, so PBO_next is not defined.

Suggested Remedy

Provide definition for PBO_next for fast retrain or otherwise resolve.

Proposed Response

Response Status W

PROPOSED REJECT.

PBO_next is set during initial training. It is not changed during fast retrain.

Cl 55 SC 55.6.1.2 P 219 L 11 # 10
Anslow, Peter
Nortel Networks

Comment Type T

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

Suggested Remedy

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 W

PROPOSED ACCEPT.

Cl 55 SC 55.6.1.2 P 219 L 11 # 10
Anslow, Peter
Nortel Networks

Comment Type T

Comment Status D

Editing instruction refers to Table 55-11, but table heading is 55-7.
Also, only additions to existing rows are shown. Deletions should also be shown in strikethrough font as described on page 14 of the draft.

Suggested Remedy

Change table heading to Table 55-11 in the first table row show "21" in strikethrough font in U19 show "Reserved, transmit as 0" in strikethrough font

Proposed Response

Response Status W

PROPOSED ACCEPT.
<table>
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<th>Cl</th>
<th>SC</th>
<th>Subcl.</th>
<th>Page</th>
<th>Line</th>
<th>#</th>
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<th>March 2010</th>
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<td>71.7.2</td>
<td>P234</td>
<td>L1</td>
<td># 13</td>
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<td>Anslow, Peter Nortel Networks</td>
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<td>There is no editing instruction for 71.7.2, but changes are shown.</td>
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<tr>
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<td>71.7.2</td>
<td>P234</td>
<td>L1</td>
<td># 13</td>
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<td>Anslow, Peter Nortel Networks</td>
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<td>72</td>
<td>72.1</td>
<td>P236</td>
<td>L25</td>
<td># 68</td>
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<td>Brown, Matt Applied Micro (AMCC)</td>
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<td>P236</td>
<td>L25</td>
<td># 68</td>
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<td></td>
<td>Comment does not fix anything that is broken and is out of scope</td>
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<tr>
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<td>L51</td>
<td># 55</td>
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<td>Brown, Matt Applied Micro (AMCC)</td>
<td>Comment Type: T  Comment Status: D</td>
<td>PMD_SERVICE.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.</td>
</tr>
<tr>
<td>72</td>
<td>72.2</td>
<td>P236</td>
<td>L51</td>
<td># 55</td>
<td></td>
<td>Brown, Matt Applied Micro (AMCC)</td>
<td>Suggested Remedy: Fully specify PMD_SERVICE.indication within Clause 72 and refer to signal detection function in 72.6.4.</td>
<td>Proposed Response:</td>
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<tr>
<td>72</td>
<td>72.2</td>
<td>P236</td>
<td>L51</td>
<td># 55</td>
<td></td>
<td>Brown, Matt Applied Micro (AMCC)</td>
<td></td>
<td>Clause 72 uses Clause 51's definition of PMD_SERVICE.indication and is covered in 72.6.4.</td>
</tr>
<tr>
<td>72</td>
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<td>P236</td>
<td>L27</td>
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<td>Brown, Matt Applied Micro (AMCC)</td>
<td>Comment Type: E  Comment Status: D</td>
<td>PMD service primitives PMD_RX_MODE and PMD_TX_MODE are not specified.</td>
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<td>72</td>
<td>72.6.10.1</td>
<td>P238</td>
<td>L21</td>
<td># 7</td>
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<td>Brown, Matt Applied Micro (AMCC)</td>
<td>Comment Type: E  Comment Status: D</td>
<td>grammar</td>
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<td>P238</td>
<td>L21</td>
<td># 7</td>
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<td>Brown, Matt Applied Micro (AMCC)</td>
<td>Suggested Remedy: change &quot;requests to transitions in&quot; to &quot;requests for transition in&quot;</td>
<td>Proposed Response:</td>
</tr>
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<td>72.6.10.1</td>
<td>P238</td>
<td>L21</td>
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<td>Brown, Matt Applied Micro (AMCC)</td>
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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: Clause, Subclause, page, line
IEEE P802.3az Energy Efficient Ethernet comments

Proposed responses: D2.3

March 2010

Cl 72  SC 72.6.11  P 238  L  25  # 70
Brown, Matt  Applied Micro (AMCC)

Comment Type  ER  Comment Status  D
72.6.11 is the PMD SI specification. Contents should be moved to 72.2.

SuggestedRemedy
Move contents of 72.6.11 to 72.2.

Proposed Response  Response Status  W
PROPOSED REJECT.

The interface is defined in the function that uses it.

Cl 72  SC 72.6.11  P 238  L  35  # 73
Brown, Matt  Applied Micro (AMCC)

Comment Type  T  Comment Status  D
Text descriptors need to be corrected. This paragraph is not required in PMD definition so it should be deleted, not fixed.

SuggestedRemedy
Delete paragraph "The transmitter ... wake phase."

Proposed Response  Response Status  W
PROPOSED REJECT.

Just informative text, no need to delete, but could possibly add alert phase.

Cl 72  SC 72.6.11  P 238  L  45  # 72
Brown, Matt  Applied Micro (AMCC)

Comment Type  E  Comment Status  D
convention

SuggestedRemedy
on line 45 change "LPI mode is implemented" to "EEE is supported".
on line 47 change "LPI mode is not implemented" to "EEE is not supported".

Proposed Response  Response Status  W
PROPOSED REJECT.

Will be revisited in sponsor ballot

Cl 72  SC 72.6.11.1.2  P 239  L   5  # 74
Brown, Matt  Applied Micro (AMCC)

Comment Type  E  Comment Status  D
generated on transitions to QUIET and to DATA

SuggestedRemedy
Change definition to ...
Generated in LPI mode and the receiver mode changes from QUIET to DATA or vice versa.

Proposed Response  Response Status  W
PROPOSED REJECT.

Cl 72  SC 72.6.11.2  P 239  L  16  # 75
Brown, Matt  Applied Micro (AMCC)

Comment Type  E  Comment Status  D
convention

SuggestedRemedy
Change "LPI mode is not implemented" to "EEE is not supported".

Proposed Response  Response Status  W
PROPOSED REJECT.

Comment does not fix anything that is broken and is on unchanged text. Will be revisited in sponsor ballot.

Cl 72  SC 72.6.11.2.3  P 239  L  16  # 76
Brown, Matt  Applied Micro (AMCC)

Comment Type  T  Comment Status  D
transmitter does not power down when tx_mode is ALERT

SuggestedRemedy
Change specification to ...
"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 transmirt function operates normally."

Proposed Response  Response Status  W
PROPOSED ACCEPT IN PRINCIPLE.
<table>
<thead>
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<th>Comment Type</th>
<th>Comment Status</th>
<th>Response Status</th>
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<td>T</td>
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<td>W</td>
<td>PROPOSED ACCEPT IN PRINCIPLE.</td>
</tr>
</tbody>
</table>

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.

**Suggested Remedy**

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**

PROPOSED ACCEPT IN PRINCIPLE.

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<table>
<thead>
<tr>
<th>Comment Type</th>
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</thead>
<tbody>
<tr>
<td>TR</td>
<td>D</td>
<td>PROPOSED REJECT.</td>
</tr>
</tbody>
</table>

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.

**Suggested Remedy**

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**

PROPOSED REJECT.

Was not part of last accepted proposal, but maybe very helpful for receiver. Need 3.az taskforce to decide.

---

<table>
<thead>
<tr>
<th>Comment Type</th>
<th>Comment Status</th>
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</thead>
<tbody>
<tr>
<td>E</td>
<td>D</td>
<td>PROPOSED ACCEPT.</td>
</tr>
</tbody>
</table>

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.

**Suggested Remedy**

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

Also on page 245 lines 4 and 16 for "30usec"
<table>
<thead>
<tr>
<th>Cl</th>
<th>SC</th>
<th>P</th>
<th>L</th>
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<tr>
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<td>Anslow, Peter</td>
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<td></td>
<td>This says &quot;that have a fractional usec value shall be rounded up to the nearest integer number in usecs.  &quot;usec&quot; and &quot;usecs&quot; are not correct.</td>
<td>SuggestedRemedy</td>
</tr>
<tr>
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<td>Change to &quot;that have a fractional value shall be rounded up to the nearest integer number in microseconds.&quot;</td>
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<td>This says &quot;This amendment add changes required to enable ...&quot;.  &quot;add&quot; should be &quot;adds&quot;</td>
<td>SuggestedRemedy</td>
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