Inconsistent text - it is not necessary to say "writes ignored" for RO bits

Suggested Remedy:
- Change: Value always 0, writes ignored
- To: Value always 0

Proposed Response: Response Status O

---

Editor's note that is to be removed for D1.2 that is still in the spec.

Suggested Remedy:
- Delete Editor's note.

Proposed Response: Response Status O

---

Editor's instruction should only be for text change.

Suggested Remedy:
- Move: Replace Figure 125-1 (as modified by IEEE Std 802.3cb-2018) with the figure found below, which adds 2.5GBASE-T1 and 5GBASE-T1. to be just before Figure 125-1. Also, move the Figure to be after 125.1.3 text.

Proposed Response: Response Status O

---

Missing Abreviation expansion

Suggested Remedy:
- Add PMA = PHYSICAL MEDIUM ATTACHMENT
- Add XGMII = 10 GIGABIT MEDIA INDEPENDENT INTERFACE
- Add MAC = MEDIA ACCESS CONTROL

Proposed Response: Response Status O

---

Incorrect font

Suggested Remedy:
- Change: AUTO-NEGOTIATION IS OPTIONAL to the same font as the rest of the text.

Proposed Response: Response Status O
Wienckowski, Natalie  General Motors

Comment Type  E  Comment Status  X
The bit time is based on the data rate, not the PHY type.

SuggestedRemedy
Remove highlighting from text in notes a and b below table 125-3.

Proposed Response
Response Status  O

---

Wienckowski, Natalie  General Motors

Comment Type  E  Comment Status  X
Editor's note to be removed prior to draft 2.0. Remove now so it isn't a change in D1.4 when WG ballot requested.

SuggestedRemedy
Delete Editor's note.

Proposed Response
Response Status  O

---

Wienckowski, Natalie  General Motors

Comment Type  E  Comment Status  X
Editor's note to be removed prior to draft 1.3.

SuggestedRemedy
Delete Editor's note.

Proposed Response
Response Status  O
Cl 149 SC 149.3.6.2.2 P102 L 8 # 16
Wienckowski, Natalie General Motors
Comment Type E Comment Status X
Missing period at end of sentence.
SuggestedRemedy
Add period after rx_raw<71:40>
Proposed Response Response Status O

Cl 149 SC 149.3.6.2.3 P103 L 30 # 17
Wienckowski, Natalie General Motors
Comment Type E Comment Status X
Missing period at end of sentence.
SuggestedRemedy
Add period after rfer_timer_done = TRUE
Proposed Response Response Status O

Cl 149 SC 149.3.8.3 P120 L 53 # 18
Wienckowski, Natalie General Motors
Comment Type E Comment Status X
Reorder references to be in numerical order.
SuggestedRemedy
Swap references to Figure 149-23 and Figure 149-22.
Proposed Response Response Status O

Cl 149 SC 149.3.8.4.6 P133 L 1 # 19
Wienckowski, Natalie General Motors
Comment Type T Comment Status X
Correct Clear REC state diagram. It will continuously loop as drawn in D1.2.
SuggestedRemedy
See wienckowski_3ch_01_0419.
Proposed Response Response Status O

Cl 149 SC 149.3.8.4.3 P126 L 16 # 20
Wienckowski, Natalie General Motors
Comment Type T Comment Status X
Move all REC associated content to 149B. Currently, some of the definition is in 149.3.8.4 and some is in 149B.
SuggestedRemedy
See wienckowski_3ch_02_0419.
Proposed Response Response Status O

Cl 149 SC 149.5.2.3 P154 L 21 # 21
Farjadrad, Ramin Aquantia
Comment Type TR Comment Status X
Modify transmit timing jitter in Master mode to include EOJ and DJ spec
SuggestedRemedy
Refer to page 5 of ad hoc presentation (farjadrad_3ch_adhoc01b_0419)
Proposed Response Response Status O

Cl 149 SC 149.5.1 P151 L 40 # 22
Farjadrad, Ramin Aquantia
Comment Type TR Comment Status X
Modify Test mode 2 to include total DJ and EOJ spec
SuggestedRemedy
Test mode 2 is for transmitter jitter testing on MDI when transmitter is in MASTER timing mode. When test mode 2 is enabled, the PHY shall transmit a continuous pattern of 16*S (+1) symbols followed by 16*S (-1) symbols for Random jitter measurement (RJ), a continuous pattern of JP03A (as specified in Clause 94.2.9.1) for Deterministic jitter measurement (DJ), and JP03B (as specified in Clause 94.2.9.2) for even-odd jitter measurement (EOJ) with the transmitted symbols timed from its local clock source
Proposed Response Response Status O
<table>
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<th>Comment ID</th>
<th>SC</th>
<th>Page</th>
<th>Line</th>
<th>Comment Type</th>
<th>Comment Status</th>
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<th>Suggested Remedy</th>
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<td>173</td>
<td>48</td>
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<td>S = 0.25 for 2.5GBase-T1</td>
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<td>S = 0.5 for 5GBase-T1</td>
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<td>S = 1 for 10GBase-T1</td>
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<td>Change 320 ns to L x 320 ns</td>
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<td>TR</td>
<td>X</td>
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</table>

**Comment ID:** 28  
**Page:** 4 of 18  
**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 Z/withdrawn  
**Sort Order:** Comment ID  
**Date:** 4/8/2019 11:15:32 AM
Cl 45 SC 45.2.1.194.1 P36 L52 # 29
Lo, William Axonne Inc.
Comment Type T Comment Status X
Clarify that is it the receiver and not the transmitter that is being configured.
Suggested Remedy
Change:
Reed-Solomon interleave setting
To:
Reed-Solomon receiver interleave setting
Proposed Response Response Status O

Cl 45 SC 45.2.1.194.3 P37 L35 # 30
Lo, William Axonne Inc.
Comment Type T Comment Status X
Clarify that is it the receiver and not the transmitter that is being configured.
Suggested Remedy
Change:
precoder setting requested by
To:
receiver precoder setting of
Proposed Response Response Status O

Cl 45 SC 45.2.1.195.1 P38 L35 # 31
Lo, William Axonne Inc.
Comment Type T Comment Status X
Clarify that is it the transmitter and not the receiver that is being configured.
Suggested Remedy
Insert after first sentence the following clarifying clause:
To:
, and controls the Reed-Solomon transmitter interleave setting of the PHY
Proposed Response Response Status O

Cl 45 SC 45.2.1.195.3 P38 L45 # 32
Lo, William Axonne Inc.
Comment Type T Comment Status X
Clarify that is it the transmitter and not the receiver that is being configured.
Suggested Remedy
Insert after first sentence the following clarifying clause:
To:
, and controls the Reed-Solomon transmitter interleave setting of the PHY
Proposed Response Response Status O

Cl 45 SC 45.2.1.194.2 P37 L29 # 33
Lo, William Axonne Inc.
Comment Type T Comment Status X
The 7 bit user field does not exist.
This is a holdover from 1000BASE-T1.
Looking at figure 149-10 octet 10 bits 7 to 1 were not used in 1000BASE-T1 but 4 of the 7 bits are now used for interleave and precode.
Suggested Remedy
This is the general description what to do and editor has editorial license to make other changes to make the text consistent.
1) Move register 1.2311.12:11 to 1.2311.5:4. Search the document to make the register move consistent.
2) 1.2311.8:6 is the 3-bit user defined field
3) 1.2311.15:9 is Reserved
4) Update table 45-155c to match and any other titles/ headings.
5) Change the 3 reserved bits in Table 149-10 (page 138) to User Defined Field It should be a single box and not 3 separate boxes.
Proposed Response Response Status O
Comment Type: T  Comment Status: X

The 7 bit user field does not exist. This is a holdover from 1000BASE-T1. Looking at figure 149-10 octet 10 bits 7 to 1 were not used in 1000BASE-T1 but 4 of the 7 bits are now used for interleave and precode.

Suggested Remedy
This is the general description what to do and editor has editorial license to make other changes to make the text consistent.
1) Move register 1.2312.12:11 to 1.2312.5:4. Search the document to make the register move consistent.
2) 1.2312.8:6 is the 3-bit user defined field from the link partner
3) 1.2312.15:9 is Reserved
4) Update table 45-155d to match any other titles/headers.

Proposed Response  Response Status: O

Lo, William  Axonne Inc.

Comment Type: TR  Comment Status: X

The loops around figure 149-24 are running at infinite speed and is not paced. I think the intention is to check the loop once per RS Frame. If we don’t do this then tx_rec will keep incrementing once rfValid is false.

Suggested Remedy
Change all 3 instances of UCT to RX_FRAME

Proposed Response  Response Status: O

Lo, William  Axonne Inc.

Comment Type: T  Comment Status: X

To avoid the possibility of TX_TCLK_175 being interpreted as divide by 32 for all speeds, add a clarifying statement.

Suggested Remedy

Change TX_TCLK_175 is equal to 5625 MHz divided by 32 to the symbol baud rate divided by 32, 16, and 8 for 10GBASE-T1, 5GBASE-T1, and 2.5GBASE-T1 respectively.

Proposed Response  Response Status: O

Lo, William  Axonne Inc.

Comment Type: T  Comment Status: X

alert_detect is defined as primitive from the PMA, PMA_ALERTDETECT.indication(alert_detect). However, PMA_ALERTDETECT.indication(alert_detect) isn’t actually a defined PMA primitive.

Suggested Remedy

On page 80 line 26, insert *149.2.2.11 PMA_ALERTDETECT.indication
This primitive is generated by PMA Receive to indicate the status of the receive link at the local PHY when rx_lpi_active is TRUE. The parameter alert_detect conveys to the PCS receive function information regarding the detection of the LPI alert signal by the PMA receive function. The criterion for setting the parameter alert_detect is left to the implementer.
149.2.2.11 Semantics of the primitive
PMA_ALERTDETECT.indication (alert_detect)
The alert_detect parameter can take on one of two values of the form:
TRUE The alert signal has been reliably detected at the local receiver.
FALSE The alert signal at the local receiver has not been detected.
149.2.2.11.2 When generated
The PMA generates PMA_ALERTDETECT.indication messages to indicate a change in the alert_detect status.
149.2.2.11.3 Effect of receipt
The effect of receipt of this primitive is specified in 149.3.2.3, Figure 149-17.”

Proposed Response  Response Status: O

McClellan, Brett  Marvell

Comment ID: 37  Page: 6 of 18
"Editor's note to be removed in draft 1.3: The OAM request to exit LPI is unneeded. Commenters are requested to provide text and edits necessary to cleanly remove this function and describe the local fault mechanism for the RS to signal exit from LPI."

This function was added in Clause 97 (1000BASE-T1) to cause the local device to exit low power idle when the link partner receiver is having trouble tracking the low power idle refresh signaling. However this function may not be necessary in an XGMII based system. Also the mechanism of exiting LPI is not described. An XGMII based PHY could generate Local Fault signals toward the Reconciliation Sublayer in a low SNR condition. The RS would respond by sending Remote Faults to the link partner, causing the link partner to stop sending LPI and start sending Idle until the fault condition is cleared. The downside to this mechanism is that the data link is interrupted in the path from the link partner to the local device.

I propose we keep the current mechanism of exiting LPI based on the OAM SNR indication but clarify how the LPI is exited.

Suggested Remedy:
on page 69 line 42
Change: "When the PHY Health status received from the link partner indicates that LPI is insufficient to maintain PHY SNR, the PHY may temporarily exit LPI mode and send idles."
To: "When the PHY Health status received from the link partner indicates that LPI is insufficient to maintain PHY SNR, the PHY shall temporarily exit LPI mode and send idles by replacing an LPI symbol group received at the XGMII with Idle symbols until the link partner no longer indicates insufficient SNR."

Proposed Response  Response Status O
This subclause which is supposed to define PSANEXT stops short and is intertwined with the subclause for PSAACR-F. There are also references to the "type A" link segment of clause 97 which need to be removed, and there should be 2 figures, one for PSANEXT and one for PSAACR-F, where there is currently only one figure - referenced in the text as for PSANEXT, and entitled as for PSAACR-F.  
(Note - This comment does not assign the values for alien crosstalk, but just fixes the editorial issues)

**Suggested Remedy**

Move P162 lines 1 through 12 to be after "PSANEXT is illustrated in Figure 149-45." (P 162 line 26), changing the reference to "NEXT" currently on lines 3 and 7 (equation 149-25) to "ACR-F".

Change title of Figure 149-45 from "PSAACR-F calculated using Equation (149-26)" to "PSANEXT loss calculated using Equation 149-25".

At the end of the (new) PSAACR-F description, add "PSAACR-F is illustrated in Figure 149-46." and insert new figure "PSAACR-F loss calculated using Equation 149-26" (figure will be autonumbered)

Delete all references to "type A" (currently 2 occurrences on page 162)

**Proposed Response**

Response Status: O
**Comment Type** | **Comment Status** | **Suggested Remedy**
--- | --- | ---
T | X | The LPI mode is a method for implementing EEE. However, when small data is periodically transmitted with a gap, the PHY repeatedly enters and leaves the LPI mode, resulting in energy loss. Also, the refresh signal in LPI mode only maintains a connection between the sender and the receiver, but does not transmit any data. In order to solve this frequent LPI transition problem, part of the unused OAM fields can be used to adjust the transmission speed depending on the change of data amount in buffers. If PHY transmit quiet time block after the our proposed OAM field, PHY can transmit PAM4 data block with information and operate various speeds. Therefore we propose OAM transmission for various speed transmission.

**Comment Type** | **Comment Status** | **Suggested Remedy**
--- | --- | ---
ER | X | There is no "PCS_Data" state. It probably meant the "SEND_DATA" state. However "PCS_Data" might be a better name for this state.

**Comment Type** | **Comment Status** | **Suggested Remedy**
--- | --- | ---
TR | X | The OAM capability is advertised via InfoField in 149.4.2.4.5.

**Comment Type** | **Comment Status** | **Suggested Remedy**
--- | --- | ---
TR | X | In Figure 149-2, "pcs_data_mode" is missing.

## Proposed Response

**Comment Type** | **Response Status**
--- | ---
ER | O

**Comment Type** | **Response Status**
--- | ---
TR | O


Comment ID 52

Page 10 of 18

4/8/2019  11:15:32 AM

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  Z/withdrawn
SORT ORDER: Comment ID
Comment ID 53

Tu, Mike Broadcom

Comment Type TR Comment Status X

dcs_data_mode already defined in 149.4.4.1

Suggested Remedy

Delete line 37 to line 41.

Proposed Response Response Status O

Comment ID 54

Tu, Mike Broadcom

Comment Type TR Comment Status X

In Figure 149-26, "pcs_data_mode" is missing

Suggested Remedy

1. Add an arrowed line coming out of the PHY CONTROL block, going up toward the PMA SERVICE INTERFACE.
2. If pcs_data_mode is made available for non-EEE mode as well, then make this a SOLID line. Otherwise make this a DASHED line.

Proposed Response Response Status O

Comment ID 55

Tu, Mike Broadcom

Comment Type TR Comment Status X

Make "pcs_data_mode" available even without optional EEE. See "tu_3ch_02_0419.pdf" for the motivation.

Suggested Remedy

1. Delete line 20.
2. Delete the last sentence, starting at the end of line 24: "In the absence of the optional EEE capability, the PHY operates as if the value of this variable is TRUE."

Proposed Response Response Status O

Comment ID 56

Tu, Mike Broadcom

Comment Type TR Comment Status X

Make sure "pcs_status" is only set to TRUE after entering data mode.

Suggested Remedy

Change the second sentence to: "It is only true if pcs_data_mode is true, block_lock is true, and hi_rfe is false."

Proposed Response Response Status O

Comment ID 57

Tu, Mike Broadcom

Comment Type TR Comment Status X

The PHY Control state diagram and the Link Monitor state diagram will result in conflicted state machines. Also if the link is interrupted after entering the SEND_DATA state, the PHY will falsely report the link status=OK for 100msec while the data connection had already been lost.

Suggested Remedy

Adopt the changes as proposed in "tu_3ch_02_0419.pdf"

Proposed Response Response Status O
Cl 149 SC 149.5.2.4 P154 L24 # 59
Tu, Mike Broadcom
Comment Type TR Comment Status X
The minimum transmit power should be reduce to -2 dBm, in order to account for potential implementation losses.

SuggestedRemedy
Change from: “the transmit power shall be in the range of -1 dBm to 2 dBm ...”
To: “the transmit power shall be in the range of -2 dBm to 2 dBm ...”

Proposed Response Response Status O

Cl 149 SC 149.1.3.3 P69 L25 # 60
Graba, Jim Broadcom
Comment Type TR Comment Status X
Alert isn't low frequency. See 149.4.2.2, page 135, lines 19-20.

SuggestedRemedy
Replace "low frequency" with "PN sequence".

Proposed Response Response Status O

Cl 149 SC 149.1.3.3 P69 L15 # 61
Graba, Jim Broadcom
Comment Type TR Comment Status X
It isn't clear in this line that Sleep is aligned with a super frame. In 149.3.2.2.21, page 94, line 49-53 the alignment is clear.

SuggestedRemedy
Clarify the Sleep alignment in 149.1.3.3. Replace "Following this event a sleep signal is transmitted by the PMA" with "Following this event the PMA transmits the sleep signal starting at the beginning of the next superframe."

Proposed Response Response Status O

Cl 149 SC 149.4.2.6 P141 L29 # 52
Benjamin, Said Aquantia
Comment Type TR Comment Status X
Alert Sequence generator can start at a random PN sequence seed when alert starts. This can add a random delay to the correlator trigger. I propose that we reset the sequence to a known value at the start of alert

SuggestedRemedy
Change from:
The PN sequence generator shift registers shall be reset to a non-zero value upon entering into the TRANSMIT_DISABLE state (see Figure 149–31).
to:
The PN sequence generator shift registers shall be reset to a value of S[7:0]=00000001 upon entering into the TRANSMIT_DISABLE state (see Figure 149–31) or on the transmission of first symbol of alert sequence. The receiver may not necessarily receive a continuous PN sequence between separate periods of SEND_S.

Proposed Response Response Status O

Cl 149 SC 149.4.2.4.3 P137 L19 # 53
Benjamin, Said Aquantia
Comment Type TR Comment Status X
Partial phy frame count (PFC24) rolls over after 2^24. Because the EEE uses 96*4 partial phy frames per QR cycle, we have to make sure that the PFC24 rolls over at a multiple of this count.

SuggestedRemedy
Add the following paragraph:
The PFC24 count must roll over to 0 after the count of 16776959 to align with EEE QR cycle.

Proposed Response Response Status O
The sentence seems to be missing some words.

**Suggested Remedy**

Change from:

ALERT, a four RS-FEC frame, shall start at the beginning of any eighth PHY frame boundary starting at the beginning of the frame following a refresh PHY frame.

To:

ALERT, a four RS-FEC frame long sequence, shall start at the beginning of any eighth PHY frame boundary starting at the beginning of the frame following a refresh PHY frame.

**Proposed Response**

Response Status: O

---

We use tx_alert_start to indicate the frame numbers where alert should start, it is more aligned with other variables to use tx_alert_active

**Suggested Remedy**

See Presentation Benyamin_3ch_02_041619 slide 2

**Proposed Response**

Response Status: O

---

Mechanism to prevent partial refresh is not necessary since refresh is only one frame long.

**Suggested Remedy**

Take out definition of tx_lpi_full_refresh

**Proposed Response**

Response Status: O

---

Mechanism to prevent partial refresh is not necessary since refresh is only one frame long.

**Suggested Remedy**

Take out definition of tx_lpi_initial_quiet

**Proposed Response**

Response Status: O

---

Mechanism to prevent partial refresh is not necessary since refresh is only one frame long.

**Suggested Remedy**

change lpi_tx_mode from:

The variable is set to QUIET when (tx_lpi_qr_active * (!tx_refresh_active + tx_lpi_initial_quiet))

to:

The variable is set to QUIET when (tx_lpi_qr_active * !tx_refresh_active)

**Proposed Response**

Response Status: O
Benyamin, Saied Aquantia

**Comment Type:** TR  **Comment Status:** X

Mechanism to prevent partial refresh is not necessary since refresh is only one frame long.

**Suggested Remedy**
See Benyamin_3ch_02_041619 slide 6 for changes to EEE state machine figure 149-18

Benyamin, Saied Aquantia

**Comment Type:** T  **Comment Status:** X

Changes submitted in Vancouver modified the text so that link synchronization PN sequence for Alert is sent directly to PMA rather than via tx_symb, as such we need to remove ALERT from this primitive.

**Suggested Remedy**
Change definition of PMA_UNITDATA.request(tx_symb) to the following:
During transmission, the PMA_UNITDATA.request simultaneously conveys to the PMA via the parameter tx_symb the value of the symbols to be sent over the MDI. The tx_symb may take on one of the following values:

-1, -1/3, +1/3, +1  
0  
the parameter LPI tx_mode is QUIET.

Benyamin, Saied Aquantia

**Comment Type:** T  **Comment Status:** X

**Suggested Remedy**
Propose to replace "offset two's complement" with "offset binary"
There is currently only one MDI return loss template for all speeds. I think we should differentiate requirements for different speeds to allow looser spec for 2.5Gbps and 5Gbps. The easiest way to achieve this is by scaling all frequency values by \( S \) except for the 1MHz lower bound.

**Proposed Remedy**

- Change:
  - 10 → 10S
  - 500 → 500S
  - 3000 → 3000S
  - 4000 → \( F_{\text{max}} \)

- Remove:
  For 2.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1, the maximum applicable frequency for the MDI return loss is \( 4000 \times S \) MHz.

**Proposed Response**

**Response Status**: O

---

The MDI curve is discontinuous at 500: 20dB versus 19.78dB.

**Proposed Remedy**

- Implicitly fixed by proposal to relax MDI return loss a bit. See next item.

**Proposed Response**

**Response Status**: O

---

Current the droop requirement is specified as "the magnitude of both the positive and negative droop shall be less than 15%, measured with respect to an initial value at 4 ns after the zero crossing and a final value at 16 ns after the zero crossing (12 ns period)". This spec is currently independent of the speed, which makes this period contain 4x more symbols at 10Gbps than at 2.5Gbps. This implies a significantly larger BLW at 2.5Gbps which increases the peak differential amplitude. If the measurement period is made a fixed number of symbols or a period length scaling by 1/S, the signal impact of droop is equivalent for all rates.

**Proposed Remedy**

- Propose to scale the droop measurement period with the speed, so replace 4, 16 and 12, by 4/S ns to 16/S ns (12/S ns period). Alternatively, this measurement period can be specified as "initial value 24 symbol periods after the zero-crossing and a final value 96 symbol periods after a zero-crossing (72 symbol periods)".

**Proposed Response**

**Response Status**: O
Maximum specified frequency for coupling attenuation has been adapted to Fmax, which make perfect sense for a single-speed transceiver. For multi-speed transceivers, it might not be desirable to mandate the need for frequency-scaling anti-aliasing filters in the design. In order to circumvent that and not overspecify channels generally, a good solution could be to require that the link segment shall meet the requirements of the highest supported rate at that port.

SuggestedRemedy
Insert after line 42:
For multi-speed transceivers the link segment shall meet the coupling attenuation requirements for highest supported rate on the MDI.

Proposed Response
Response Status O

The current coupling attenuation spec, originating from contribution mueller_3ch_02a_0518.pdf might be insufficient to ensure signal integrity. On slide 4 it states that "With existing cables and connectors an introduced differential noise level of a few mV (4mV or less) is achievable in a BCI test with 200mA interfering current," which seems based on ... Note that the suggested templates in that ppt don't seem to have a 6dB/octave slope. Which BCI level is assumed achievable by these transceivers? And is this 4mV safeguarded by the coupling attenuation template or is this just these actual cables showed that result? Note that these cables are apparently better then the specified template. The differential signal magnitude at Nyquist can be about the same level of a few mV. I think we should ensure that the injected interfering differential signal component (due to coupling attenuation) should be at least 6dB below the signal level. Therefore it seems that the coupling attenuation spec needs to be tightened. Looking at the more recently measured coupling attenuation curves the corner can be shifted without problem to 1GHz, but that might not yet be sufficient.

SuggestedRemedy
Replace:
750 MHz --> 1000 MHz
70 dB for f>1000 MHz
70-20*log(f/1000) for 1000<f<Fmax MHz

Proposed Response
Response Status O
den Besten, Gerrit  
NXP Semiconductors

Comment Type T  Comment Status X
I would like to make explicit that the low-frequency roll-up is there to enable PoDL, and that without PoDL the RL extends at 20dB down to 1MHz.

SuggestedRemedy
Split the low-frequency spec in two options:
- with PoDL: 20-20*log(f/10S) dB
- without PoDL: 20dB

Proposed Response  Response Status O

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In reality there is a piece of the channel between the MDI connector and the transceiver which is not accounted for in link segment IL & RL. Although the IEEE PHYs set mandatory specs for the MDI reference point, which makes a lot of sense, I think it would be useful to add informative specs for IL & RL for the part of the channel behind the MDI. IMO, the assumptions for IL & RL for this module-internal channel part, used to define the spec, should be mentioned.

SuggestedRemedy
Propose to change test mode 2 for measuring master transmit jitter on MDI at full speed, using a toggling {+1} {-1} symbol pattern. This is technically a divide-by-two clock where both rising and falling zero crossings are taken into account for measurements.

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"The band-pass bandwidth of the measurement device shall be larger than 200 MHz." This is probably based on a divide-by-32 clock, that would run at 5625/32=175.8MHz, so 200MHz wouldn't be limiting in that case. Note that higher frequency jitter is partly masked in this case.

SuggestedRemedy
Propose to adapt test mode 2 to a symbol rate toggling (+1) (-1) pattern and measure jitter with a bandwidth of the measurement device of at least Fmax.

Proposed Response  Response Status O
Transmit PSD mask. During the Vancouver meeting I've presented modifications to the Transmit PSD mask. There have been interactive discussion on this with some modifications to the material. The decision on this topic was postponed to the next meeting to give people time to review internally.

**Suggested Remedy**

Propose to change transmit PSD mask according to the attached presentation.

**Proposed Response**

**Response Status**