Cl **00** *SC* **0** *P* **1** *L* **31** # 1695

Remein, Duane Huawei Technologies I

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

Update copyright date

SuggestedRemedy

EIC to set variable copyright_year to 2014 in entire draft

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **00** *SC* **45.2.7a.1.3** *P* **44** *L* **29** # 1706

Remein, Duane Huawei Technologies I

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

RO footnote not needed
(applies to Tables 45-191a & 45-191b)

SuggestedRemedy

remove RO footnote.

included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **101** *SC* **101.3.5.3.3** *P* **104** *L* **43** # 1663

Laubach, Mark Broadcom

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

Need a small change for alignment to Downstream PHY path block diagram.

SuggestedRemedy

In the bottom box, change "PMA" to "Scrambler".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **101** *SC* **101.3.6.1.2** *P* **111** *L* **6** # 1671

Laubach, Mark Broadcom

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

In discussions with Pat Thaler, on CRC40 failure and setting all Bq block sync headers to "11" introduces problems with Clause 49 block error monitoring operation due to the large number of impacted 64B/66B blocks on CRC40 failure. The suggested remedy has been adapted based on Clause 74.7.4.5 handling for 10GBASE-R for minimal change to Clause 49's usual operation.

SuggestedRemedy

Replace the sentence beginning with "If this user-" with the following:
If this user-configurable option is enabled and the calculated value of CRC40 does not match the value of CRC40 retrieved from the received FEC codeword the decoder indicates error to the PCS by means of setting both sync bits to the value 11 in the first Bq block and every 8th Bq block, e.g. 1st, 9th, 17th, 25th, etc. as well as the last Bq block decoded 64B/66B blocks from the corresponding errored FEC codeword. With reference to Clause 49 operation and when operating with EPoC, the BER monitor state machine is disabled.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Replace the sentence beginning with "If this user-" with the following:

"If this user-configurable option is enabled and the calculated value of CRC40 does not match the value of CRC40 retrieved from the received FEC codeword the FEC decoder indicates error to the PCS by replacing bit <0> and <1> in the sync header with the binary value of "11" in the first Bq block and every 8th Bq block, e.g. 1st, 9th, 17th, 25th, etc. as well as the last Bq block from the errored FEC codeword. The BER monitor state machine as defined in Clause 49 is then disabled."

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1667

Laubach, Mark Broadcom

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

Need text for PMA downstream Cyclic Prefix and Windowing function as per downstream PHY Block Diagram Figure 100-2, and for PMA upstream Cyclic Prefix and Windowing function as per upstream PHY Block Diagram Figure 100-3.

SuggestedRemedy

Adopt IDFT text from laubach_3bn_14_0514 (either .pdf or .docx) and insert into draft for the respective downstream and upstream Cyclic Prefix and Windowing functions, following PMA sections as per laubach_3bn_10_0514 (if approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_14_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1670

Laubach, Mark Broadcom

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

Need text for PMA downstream Time and Frequency Synchronization section as per PMA outline in laubach_3bn_10_0514.

SuggestedRemedy

Adopt Time and Frequency Synchroniation text from laubach_3bn_17_0514 (either .pdf or .docx) and insert into draft for downstream Time and Frequency Synchronization section, following PMA sections as per laubach_3bn_10_0514 (if outline was approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_17_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1669

Laubach, Mark Broadcom

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

Need text for PMA downstream Pilot Map and Pilot Insertion functions as per downstream PHY Block Diagram Figure 100-2.

SuggestedRemedy

Adopt symbol mapper text from laubach_3bn_16_0514 (either .pdf or .docx) and insert into draft for downstream Pilot Map and Pilot Insertions sections respectively, following PMA sections as per laubach_3bn_10_0514 (if outline was approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_16_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1668

Laubach, Mark Broadcom

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

Need text for PMA upstream Pre-Equalization Coefficients subsection of IDFT function section as per upstream PHY Block Diagram Figure 100-3.

SuggestedRemedy

Adopt Pre-Equalization Coefficient text from laubach_3bn_15_0514 (either .pdf or .docx) and insert into draft as a subsection on upstream IDFT functions, following PMA sections as per laubach_3bn_10_0514 (if approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_15_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1666

Laubach, Mark Broadcom

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

Need text for PMA downstream Time and Frequency interleaving function as per downstream PHY Block Diagram Figure 100-2.

SuggestedRemedy

Adopt Time and Frequency Interleaver text from laubach_3bn_13_0514 (either .pdf or .docx) and insert into draft, following PMA sections as per laubach_3bn_10_0514 (if approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_13_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1665

Laubach, Mark Broadcom

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

Need text for PMA downstream IDFT function as per downstream PHY Block Diagram Figure 100-2, and for PMA upstream IDFT function as per upstream PHY Block Diagram Figure 100-3.

SuggestedRemedy

Adopt IDFT text from laubach_3bn_12_0514 (either .pdf or .docx) and insert into draft for the respective downstream and upstream IDFT functions, following PMA sections as per laubach_3bn_10_0514 (if approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_12_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1664

Laubach, Mark Broadcom

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

Need text for Downstream Symbol Mapper PMA function as per downstream PHY Block Diagram Figure 100-2.

SuggestedRemedy

Adopt symbol mapper text from laubach_3bn_11_0514 (either .pdf or .docx) and insert into draft for downstream Symbol Mapper function, following PMA sections as per laubach_3bn_10_0514 (if outline was approved).

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_11_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4** *P* **121** *L* **1** # 1662

Laubach, Mark Broadcom

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

The PMA sections need to be replaced/aligned to the downstream and upstream PHY path functional block diagrams.

SuggestedRemedy

Use the main PMA section titles as per laubach_3bn_10_0514.pdf (docx). Move existing "101.4.1 Burst Markers" under "101.4.3.8 Burst Markers". Move existing "101.4.2 Constellation structure and mapping for LDPC FEC" to section "101.4.2.5.3. QAM Constellation Mappings".

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_10_0514.pdf for reference available at the time when the comment was considered.

Cl **101** *SC* **101.4.1** *P* **121** *L* **4** # 1692

Remein, Duane Huawei Technologies I

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

It is not at all obvious what the material in this section has to do with burst markers, if anything. The text "Tsd in Table 101-11 and Table 101-12 represents sample clock period, equal to 1/204.8 MHz" at pg 121 line 53 applies to tables 101-13 & 101-14 as well.

SuggestedRemedy

Implement the outline for Section 101.4 shown in lauback_3bn_10_0514.
Move the contents of 1st & 2nd para in this section into section 101.4.2.4 "Pilot Map"
Move Tables 101-11 to 101-14 to section 101.4.2.9 "Cyclic Prefix and Windowing"
To each of these tables add a note modifying "[Tsd]" that reads: "Tsd represents sample clock period, equal to 1/204.8 MHz" (follow subscripting.
Remove the text at pg 121 line 53 that reads "Tsd in Table 101-11 and Table 101-12 represents sample clock period, equal to 1/204.8 MHz"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No laubach_3bn_10_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4.2** *P* **126** *L* **3** # 1684

Remein, Duane Huawei Technologies I

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

Stray PLC, but more importantly this bit ordering/mapping is specified in more than one place, here and in Cl 102.1.6. Mapping for any given stream should only appear once in the draft.

SuggestedRemedy

It is probably better to consolidate all constellation mappings in one place and reference them throughout the draft. A separate comment exists to remove the material from Cl 102 (see remein_3bn_01_0514.pdf which identifies changed/removed material).
Change to "PLC" to "PHY Link"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
No remein_3bn_01_0514 available for consideration at the time when the comment was considered.

Cl **101** *SC* **101.4.2.3** *P* **127** *L* **2** # 1686

Remein, Duane Huawei Technologies I

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

Use of QPSK as an example is ill advised given that we have removed it from both Cl 45 registers and Cl 100 tables.

SuggestedRemedy

Remove Figure 101-3 (QPSK mapping)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1** *P* **133** *L* **12** # 1707

Remein, Duane Huawei Technologies I

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

The following sentences could be clearer.
"The PHY Link uses a broadcast combined with straightforward query response protocol to transfer information in MDIO registers between the CLT and it's subtended CNUs and vice versa. The PHY Link uses a fixed frame format, that shall be aligned with the 128 symbol staggered pilot pattern as described in {ref}."

SuggestedRemedy

Change 1st sentence to read:
"The PHY Link uses a straightforward query response protocol with broadcast capability to transfer information in MDIO registers between the CLT and it's subtended CNUs and vice versa."
Move the 2nd sentence to 102.2.3 (1st sentence in para) so the para begins:
"The downstream PHY Link uses a fixed frame format, that shall be aligned with the 128 symbol staggered pilot pattern as described in {ref} and is composed of a fixed header, ..."

(see remein_3bn_01_0514.pdf)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1.2** *P* **135** *L* **33** # 1683

Remein, Duane Huawei Technologies I

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

Update to PHY Link architecture figure.

SuggestedRemedy

Replace with Figure 102-4 & 102-4a from remein_3bn_01_0514. Remove 2 Ed. Notes preceding figure 102-4.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1.3** *P* **136** *L* **1** # 1682

Remein, Duane Huawei Technologies I

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

Suggested text for 102.1.3 PHY Link Message Engine.

SuggestedRemedy

Add the following:
"The PHY Link Message Engine block is responsible for the origination and termination of all messages passed over the PHY Link and all PHY to PHY signaling; including PHY Discovery Response and Fine Ranging Response. In the downstream direction there are four message blocks; the Timestamp Message Block, the EPoC PHY Frame Header, the EPoC Message Block, and the FEC Parity Message Block. In the upstream direction there is only the EPoC PHY Frame Header and the EPoC Message Block. The upstream PHY Link Message Engine also has the two additional PHY to PHY signaling types; the PHY Discovery Response and the Fine Ranging Response.
The content of each message block is detailed below as is the characteristic of the two additional PHY signaling types. The Details of the PHY Message Engine behavior is described in 102.2.4 and 102.3.4."
(included in remein_3bn_01_0514.pdf)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1.6.1** *P* **140** *L* **36** # 1685

Remein, Duane Huawei Technologies I

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

The text here duplicates the constellation mapping text in Cl 101.4.2 (see separate comment against 101.4.2 pg 126 ln 3).

SuggestedRemedy

Change the text here from:
"The Phy maps each scrambled nibble {y0, y1, y2, y3} of normal PHY Link data (i.e., excluding PHY Discovery and Fine Ranging) into a complex number using the 16-QAM constellation mapping shown in Figure 102–10. The Phy multiplies the real and imaginary parts by '@@@' to ensure that mean-square value of the QAM constellation is unity."
('@@@' is 1/(sq root (10)))
to:
"The Phy shall map each scrambled nibble {y0, y1, y2, y3} of normal PHY Link data (i.e., excluding PHY Discovery and Fine Ranging) into a complex number using the 16-QAM constellation mapping shown in 101.4.2.3. The Phy multiplies the real and imaginary parts by '@@@' to as shown in Table 101-18 to ensure that mean-square value of the QAM constellation is unity."
Remove Figure 102-10
These changes are included in remein_3bn_01_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1.6.1** *P* **140** *L* **8** # 1677

Remein, Duane Huawei Technologies I

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

This para is misplaced, it details how bytes from PHY Link Message Engine are mapped to a bit stream prior to FEC encoding. It should also be placed at end of PHY Link Message Engine.

SuggestedRemedy

Move text & figure to end of PHY Link Message Engine (included in remein_3bn_01_0514.pdf)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1.7** *P* **141** *L* **19** # 1687

Remein, Duane Huawei Technologies I

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

Text for introductory paragraph on Symbol Duplication

SuggestedRemedy

Add:
The Phy duplicates certain symbols for upstream transmission of PHY Discovery and Fine Ranging responses. This duplication is accomplished by duplicating the data (including FEC parity) in the upstream data path for these signals. This is detailed in 102.4.1.4 for PHY Discovery response and in 102.4.1.5 for the Fine Ranging response. Control for the duplication process is conveyed using the TxType in the CNU (see Figure 102-4a) and RxType in the CLT (see Figure 102-4).
This change is included in remein_3bn_01_0514.pdf.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.1.8** *P* **141** *L* **21** # 1689

Remein, Duane Huawei Technologies I

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

Text for introductory paragraph on Interleaving

SuggestedRemedy

Add:
Data in the PHY Link channel is time interleaved. For the downstream direction this time interleaving is described in 102.2.1.3. while it is described in 102.3.1.3 for the upstream direction.
Transmissions in the upstream direction for PHY Discovery Response and Fine Ranging Response are not time interleaved.
Control for the interleaving process is conveyed using the TxType in the CNU (see Figure 102-4a) and RxType in the CLT (see Figure 102-4).
This change is included in remein_3bn_01_0514.pdf.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.2.1.1** *P* **141** *L* **41** # 1676

Remein, Duane Huawei Technologies I

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

We should explicitly state that the PHY Link uses the same symbol and CP size as the PCS. Also the introductory para should be DS specific.

SuggestedRemedy

Change:
"During network setup a specific amount of RF spectrum is allocated for use by the PHY Link in both the US and the DS directions. The allocated spectrum shall reside anywhere within a 24 MHz contiguous OFDM/OFDMA channel spectrum (i.e., 24 MHz with no internal exclusion bands) and have at least 3 MHz of contiguous spectrum above and below it for a total band of 6 MHz. This PHY Link band also includes eight pilot tone subcarriers placed symmetrically above and below the information sub-carriers as illustrated in Figure 102–11. The DS PHY Link is located per the "DS PHY Link #n Start" parameter (see 45.2.1.112) that determines the lowest frequency sub-carrier of the PHY Link information channel. The parameter determines the position of the PHY Link in all DS OFDM channels in a multi-channel Phy. Precise placement of the eight pilot tones is described in {ref}. No additional pilot tones are allowed within this 6 MHz band (see ref). In the DS direction the PHY Link shall be allocated 400 kHz of spectrum"

To read:
"During network setup the downstream PHY Link shall be allocated 400 kHz of spectrum. The allocated spectrum for the downstream PHY Link shall reside anywhere within a 24 MHz contiguous OFDM channel spectrum (i.e., 24 MHz with no internal exclusion bands) and have at least 3 MHz of contiguous spectrum above and below it for a total band of 6 MHz. This PHY Link band also includes eight pilot tone subcarriers placed symmetrically above and below the information sub-carriers as illustrated in Figure 102–11. The downstream
PHY Link is located per the "DS PHY Link #n Start" parameter (see 45.2.1.112) that determines the lowest frequency sub-carrier of the PHY Link information channel. The parameter determines the position of the PHY Link in all DS OFDM channels in a multi-channel Phy. Precise placement of the eight pilot tones is described in {ref}. No additional pilot tones are allowed within this 6 MHz band (see ref). The downstream PHY Link shall use the same OFDM Symbol size and Cyclic Prefix duration as the downstream MAC data channel."
This change is included in remein_3bn_01_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.2.1.2** *P* **142** *L* **11** # 1674

Remein, Duane Huawei Technologies I

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

Errors in Figure 102-11
- the "(16)" referencing the number of pilots in the 6 MHz band is a carryover for 8K days.
-the band just below the upper exclusion band is labeled as 0-24 MHz. This may or may or not be the case.

SuggestedRemedy

Remove the "(16)"
change to ">= 0 MHz" for area both above and below PHY Link band

Included in remein_3bn_01_0514.pdf (available in FrameMaker)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.2.1.3** *P* **142** *L* **40** # 1673

Remein, Duane Huawei Technologies I

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

Figure 102-9 bit ordering, little end indian /big end indian issues were noted in cmt 1610 but no figure suggested.
There are also several errors in the para; Ref to 102.4.1.5 is incorrect, statement regarding "240 data bits entering the LDPC encoder and 384" is incorrect (no such encoder), the ref to "{u_i, i=0, 1, … , 95}" does not match the figure.

SuggestedRemedy

Replace 1st two para in 102.2.1.3 and Figure 102-12 and 102-13 with the contents of the same section in remein_3bn_01_0514.pdf (Fig 102-13 is not changed, only redrawn in framemaker

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.2.3.2** *P* **148** *L* **26** # 1678

Remein, Duane Huawei Technologies I

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

Extraneous text in para describing the DS EMB OPCODE; "of the PHY DA and". There is no DA in the EMB.

SuggestedRemedy

Remove the phrase here, change from:
"The CLT shall only transmit the valid values of the PHY DA and OPCODE fields as given in Table 102–7, and Table 102–8 respectively."
So the sentence reads:
"The CLT shall only transmit the valid values of the OPCODE field as given in Table 102–8."

Add sentence to 102.2.3.1.1 DS EPoC PHY Frame Header at the ended of the para beginning "The PHY Link DA is an address field that identifies the CNU that the PHY frame is targeted for" that reads:
"The CLT shall only transmit the valid values of the PHY DA as given in Table 102–7."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.3.1.1** *P* **141** *L* **41** # 1690

Remein, Duane Huawei Technologies I

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

We should define the bandwidth of the US PHY Link as 400 kHz and explicitly state that the PHY Link uses the same symbol and CP size as the PCS. An introductory para is also suggested.

SuggestedRemedy

Change section to read:
"During network setup the upstream PHY Link shall be allocated 400 kHz of spectrum. The allocated spectrum for the upstream PHY Link shall reside anywhere within a 24 MHz contiguous OFDM channel spectrum (i.e., 24 MHz with no internal exclusion bands) and have at least 3 MHz of contiguous spectrum above and below it for a total band of 6 MHz. This PHY Link band also includes eight pilot tone subcarriers placed symmetrically above and below the information sub-carriers as illustrated in Figure 102–11. The upstream PHY Link is located per the "US PHY Link Start" parameter (see 45.2.1.113) that determines the lowest frequency sub-carrier of the PHY Link information channel. Precise placement of the eight pilot tones is described in {ref}. No additional pilot tones are allowed within this 6 MHz band (see ref). The upstream PHY Link shall use the same OFDM Symbol size and Cyclic Prefix duration as the upstream MAC data channel."

This change is included in remein_3bn_01_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Given proposed Superframing underdiscussion it is posible that the BW assigned to the US PHY Link may be variable in both frequency and in bit loading.

Cl **102** *SC* **102.3.1.1** *P* **149** *L* **27** # 1688

Remein, Duane Huawei Technologies I

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

We should nail down the US PHY Link spectrum at 400 kHz (same as DS).

SuggestedRemedy

Change:
"In the US direction the PHY Link shall be allocated TBD kHz of spectrum for information."
to:
"In the US direction the PHY Link shall be allocated 400 kHz of spectrum for information."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See response to comment 1690

Cl **102** *SC* **102.3.1.2** *P* **149** *L* **31** # 1691

Remein, Duane Huawei Technologies I

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

Suggested text for US PHY Link modulation

SuggestedRemedy

add:
"The upstream PHY Link shall use a 16-QAM constellation for all information sub-carriers."

This change is included in remein_3bn_01_0514.pdf

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

There is no real reason to limit the US PHY Link to any given modulation level. This can be left up to the implementer/user

Cl **102** *SC* **102.3.3.2** *P* **150** *L* **24** # 1679

Remein, Duane Huawei Technologies I

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

Misworded requirement: "The CNU must respond to PHY Link read and write/verify instructions ...". Also the statement is slightly imprecise.

SuggestedRemedy

Change to read:
"if the PHY Link EFHB contains the unicast CNU_ID for the CNU, it shall respond to PHY Link instructions using the PHY Response."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **102** *SC* **102.4.1.4** *P* **152** *L* **35** # 1680

Remein, Duane Huawei Technologies I

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

We now have a specified start time for the PHY Discovery window so the following sentence is incorrect:
"Off-line CNUs, upon receiving a PHY Discovery Instruction, wait for the beginning of the next upstream frame and then transmit a PHY Discovery Response to the CLT."

SuggestedRemedy

Change the sentence to read:
"Off-line CNUs, upon receiving a PHY Discovery Instruction, wait for the beginning of the PHY Discovery window and then transmit a PHY Discovery Response to the CLT."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2** *P* **28** *L* **21** # 1697

Remein, Duane Huawei Technologies I

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

Table 45-2 row m.5.12 what is OFMD?

SuggestedRemedy

Change to OFDM

This change is included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1** *P* **30** *L* **3** # 1698

Remein, Duane Huawei Technologies I

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

We're not inserting register 1.117. It would also make sense to split the table modifications into separate table (see 802.3bj for an example).

This issues also exists at pg 31 line 4.

SuggestedRemedy

Change Editorial Instruction Pg 30 Ln 3 to read:
"Change the two identified reserved rows in Table 45-3 (as modified by IEEE Std 802.3bj-201x and IEEE Std 802.3bm-201x) and insert a new rows as follows:"
Split table 45-3 into tow illustrations, the first covering changes to row "1.16 through 1.29" and the second covering changes to row "1.1809 through 1.32767"

Change Editorial Instruction Pg 31 Ln 4 to read:
"Change the identified reserved row in Table 45-6 (as modified by IEEE Std 802.3bj-201x and IEEE Std 802.3bm-201x) and insert a new row immediately below the changed row as follows:"

These changes are included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.107** *P* **35** *L* **14** # 1700

Remein, Duane Huawei Technologies I

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

Table 45-78a needs footnote for RO

SuggestedRemedy

Add to footnote a:
"RO = Read only, "

This change is included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.108** *P* **36** *L* **4** # 1696

Remein, Duane Huawei Technologies I

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

Need to align enum for Windowing and CP with that agreed to in Comments 1303, 1304, & 1306 from Draft 0.3.

SuggestedRemedy

Pg 36 ln 7 change enum for DS Windowing to:
6 5 4
1 1 x = reserved
1 0 1 = 256 samples
1 0 0 = 192 samples
0 1 1 = 128 samples
0 1 1 = 64 samples
0 0 1 = reserved
0 0 0 = windowing disabled

Pg 36 ln 16 change enum for DS cyclic prefix to:
3 2 1 0
0 1 0 0 = reserved
0 0 1 1 = 768 samples
0 0 1 0 = 512 samples
0 0 0 1 = 256 samples
0 0 0 0 = reserved

Pg 38 ln 11 change enum for US Windowing to:
6 5 4
1 1 1 = 256 samples
1 1 0 = 192 samples
1 0 1 = reserved
1 0 0 = 128 samples
0 1 1 = reserved
0 1 0 = 64 samples
0 0 1 = reserved
0 0 0 = windowing disabled

This change is included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.109.1** *P* **37** *L* **18** # 1672

Remein, Duane Huawei Technologies I

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

Rather than duplicate this text n times, once for each channel, we should enumerate the channels.

The sentence "Since sub-carrier 0 is always excluded, it will actually be below the allowed downstream spectrum band." is extraneous and should be omitted here, perhaps being include in Cl 100 where the OFDM numerology is described.

SuggestedRemedy

Combine sections 45.2.1.109.1 thru 45.2.1.109.4 to read:
"45.2.1.109.1 DS OFDM center freq (1.1902.15:0 through 1.19aa.15:0)
"Registers 1902 through 19aa specify the center frequency, in steps of 50 kHz, of sub-carrier 0 for each OFDM channel. Sub-carriers are numbered from 0 to 4095 with sub-carrier 0 at the lowest frequency. This definition equates to a center frequency from TBD MHz to 3,276.75 MHz in 50 kHz steps. The minimum value for this register is TBD.
* Register bits 1902.15:0 specify the center frequency of OFDM channel 1
* Register bits 1903.15:0 specify the center frequency of OFDM channel 2
* Register bits 19aa.15:0 specify the center frequency of OFDM channel n"

With luck we can finalize on what "n" is and complete the table at the next meeting.
This change is illustrated in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.111** *P* **39** *L* **8** # 1701

Remein, Duane Huawei Technologies I

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

Don't need the following:
RO footnote or
"ch 1" in Name or
"first" and "Since sub-carrier 0 is always excluded, it will actually be below the allowed downstream spectrum band." in 45.2.1.111.1

SuggestedRemedy

remove as shown in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.111.1** *P* **39** *L* **13** # 1703

Remein, Duane Huawei Technologies I

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

Missing step size. I believe we agree to 50 kHz

SuggestedRemedy

Change:
", in steps of ,"
to read
", in steps of 50 kHz,"

included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.117** *P* **42** *L* **35** # 1704

Remein, Duane Huawei Technologies I

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

Footnote to table 45-78k should include R/W

SuggestedRemedy

Add "R/W = Read/Write" to footnote "a"

included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.117.1** *P* **42** *L* **40** # 1681

Remein, Duane Huawei Technologies I

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

The description does not include the direction to adjust the timing based on the sign of the value.
It is preferred we are consistent with D3.1 with this parameter.

SuggestedRemedy

Add before the last sentence:
"A negative value causes the timing to be delayed, resulting in later times of transmission at the CNU."
Note "parameter" in 1st sentence of para is misssspelled.

This change is included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.118** *P* **43** *L* **13** # 1705

Remein, Duane Huawei Technologies I

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

Add std footnote to table 45-78i

SuggestedRemedy

Footnote to read:
"RO = Read only, R/W = Read/Write"

included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.13a** *P* **34** *L* **8** # 1699

Remein, Duane Huawei Technologies I

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

The term "EPoC" is missing from the title of this table. Also foot note needs to be aligned with RO not R/W

SuggestedRemedy

Change table title to read:
"EPoC PMA/PMD ability register bit definitions"
Change footnote to read:
"RO = Read only"

This change is included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.6** *P* **33** *L* **10** # 1694

Remein, Duane Huawei Technologies I

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

It has been suggested that we leave some open space above 100G PMD as now exists above 40G.

SuggestedRemedy

In Table 45-7 Change from:
1 1 0 x 1 x = reserved for future use
1 1 0 0 0 1 = 10GPASS-XR-U PMA/PMD
1 1 0 0 0 0 = 10GPASS-XR-D PMA/PMD
To:
1 1 0 0 1 1 = 10GPASS-XR-U PMA/PMD
1 1 0 0 1 0 = 10GPASS-XR-D PMA/PMD
1 1 0 0 0 x = reserved for future use

use appropriate mark up

This change is included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.113** *P* **38** *L* **34** # 1702

Remein, Duane Huawei Technologies I

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

Missing "-U" in "10GPASS-XR DS PHY Link search control register"

SuggestedRemedy

Change to read:
"10GPASS-XR-U DS PHY Link search control register"

included in remein_3bn_02_0514.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.7a.1** *P* **44** *L* **10** # 1675

Remein, Duane Huawei Technologies I

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

Add modulation type for Exclusion Sub Carrier in Tables 45-191a & 45-191b

SuggestedRemedy

In each table replace enum 1 1 1 0 (16384-QAM) with "Excluded Sub-carrier"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **Annex 1** *SC* **100A** *P* **235** *L* **6** # 1693

Remein, Duane Huawei Technologies I

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

"(normative)" need not appear twice in the header

SuggestedRemedy

Strike the second one so the annex title reads:
"EPoC channel model"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.