Cl **00**　　*SC* **0**　　　　　　*P* **72**　　*L* **37**　　# 2836
Remein, Duane　　　　　　　Huawei Technologies

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

It would be good to be explicitly about OFDM channels in all cases.

SuggestedRemedy

Replace "channel" with "OFDM channel" wherever appropriate (i.e., where it refers to an EPoC OFDM channel and is not preceded with OFDM or OFDM already).

Proposed Response　　*Response Status* **O**

Cl **00**　　*SC* **101.3.3.1.4**　　*P* **117**　　*L* **36**　　# 2877
Remein, Duane　　　　　　　Huawei Technologies

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

Need mdio register to reflect FecCodeWordCount, FecCodeWordFail, & FecCodeWordSuccess (see 101.3.3.1.4 pg 117 ln 31).

SuggestedRemedy

Add to MDIO Mapping table (see remein_3bn_14_1114.pdf)

Proposed Response　　*Response Status* **O**

Cl **00**　　*SC* **101.4.3.11**　　*P* **149**　　*L* **3**　　# 2889
Remein, Duane　　　　　　　Huawei Technologies

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

Reference should be table 101-14

SuggestedRemedy

per comment

Proposed Response　　*Response Status* **O**

Cl **01**　　*SC* **1.4.127**　　*P* **22**　　*L* **15**　　# 2412
Hajduczenia, Marek　　　　　　Bright House Network

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

need a comma before "and" in a serial list

SuggestedRemedy

Change "Clause 100, Clause 101 and Clause 102" to "Clause 100, Clause 101, and Clause 102"

Proposed Response　　*Response Status* **O**

Cl **01**　　*SC* **1.4.160a**　　*P* **22**　　*L* **32**　　# 2413
Hajduczenia, Marek　　　　　　Bright House Network

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

"an effective delay between symbol payloads" ... what is a "symbol payload"? This is the only instance in the whole draft.

SuggestedRemedy

Either define what it is, or use terms used in PCS clause for EPoC.

Proposed Response　　*Response Status* **O**

Cl **01**　　*SC* **1.4.160a**　　*P* **22**　　*L* **32**　　# 2414
Hajduczenia, Marek　　　　　　Bright House Network

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

"The k redundant CP samples attached at the beginning of the symbol are identical to the last k samples of the same symbol." - this is not really important to the definition, but might need to be explained / included where the actual cyclix prefix is shown relatve to the frame structure.

SuggestedRemedy

Remove from definition and move into location where the use of a cyclix prefix is defined in PCS / PMD Clause

Proposed Response　　*Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **01**
SC **1.4.160a**

Page 1 of 41
10/21/2014 1:06:11 PM

Cl **01**   *SC* **1.4.280a**   *P* **22**   *L* **39**   # 2415
Hajduczenia, Marek   Bright House Network

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

OFDM channel definition does not read right and contains unnecessary details.

SuggestedRemedy

Change to read: "A data transmission channel carrying a number of closely-spaced orthogonal QAM subcarriers. The total data capacity of the OFDM channel is divided into individual QAM subcarriers, where each subcarrier is modulated with low data rate."

Proposed Response   *Response Status* **O**

Cl **01**   *SC* **1.4.331a**   *P* **22**   *L* **50**   # 2416
Hajduczenia, Marek   Bright House Network

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

Definition of QAM symbol is very confusing.

SuggestedRemedy

do we really need ", or, in OFDM, that modulate each of OFDM subcarriers" ?

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **10.2.6.1**   *P* **73**   *L* **3**   # 2447
Hajduczenia, Marek   Bright House Network

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

"a 192 MHz OFDM channel shall target a 1.6 Gb/s data rate at MAC/PLS" - what does it really mean?

SuggestedRemedy

Change to "a 192 MHz OFDM channel shall support the data rate of 1.6 Gb/s at MAC/PLS" or whatever other data rate that is assumed to be achievable. "shall target" is meaningless

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1**   *P* **66**   *L* **1**   # 2898
Laubach, Mark   Broadcom Corporation

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

This is an editor's comment: there are previously embedded conditionals in this clause file.

SuggestedRemedy

Confirmed with Joe Solomon. Can remove all conditional tags and any text in Clause 100 fm file.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1.1**   *P* **66**   *L* **13**   # 2399
Hajduczenia, Marek   Bright House Network

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

It is not clear why we keep on making references to all the stuff described in lines 13 through 22.

SuggestedRemedy

Remove lines 13 through 22

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1.2**   *P* **66**   *L* **33**   # 2400
Hajduczenia, Marek   Bright House Network

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

Remove "Goals and objectives" - to be useful, this ought to be repeated in 101, 102, and 103.

SuggestedRemedy

Per comment - remove 100.1.2

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **100**
SC **100.1.2**   Page 2 of 41
10/21/2014 1:06:11 PM

Cl **100**   *SC* **100.1.4**   *P* **66**   *L* **43**   # 2401

Hajduczenia, Marek   Bright House Network

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

   Subclause 100.1.4 shows transmit direction for CNU and CLT. Where is receive direction
   for CNU and CLT?

SuggestedRemedy

   Insert receive direction for CNU and CLT

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1.4**   *P* **68**   *L* **12**   # 2838

Remein, Duane   Huawei Technologies

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

   Figure 100-2 NCP Generation should be FCP Generation not NCP

SuggestedRemedy

   per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1.4**   *P* **68**   *L* **2**   # 2905

Laubach, Mark   Broadcom Corporation

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

   Update figure for the following:
   1) "+" was mistakenly put at bottom of PMA when it should be in PMD and part of PMD
   Functions (implementation dependent)
   2) Scrambler and FCP (old NCP) require use of PMA start of frame for alignment, should
   be in PMA

SuggestedRemedy

   1) Remove multiple channel summation lines and "+". Replace with individual paths from
   each channel to PMD Functions. Combining is implementation dependent.
   2) Move Scrambler and FCP (old NCP) into Symbol Mapper of PMA. Scrambler can
   become a subfunction of the downstream symbol mapper, FCP provides and to the PHY
   Link for the FCP field. The Scrambler and FCP changes are linke to the approval of the
   text changes in comment XXXX, also by Mark Laubach. Figure in
   laubach_3bn_10_1114.pdf (fm)

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1.5**   *P* **70**   *L* **7**   # 2402

Hajduczenia, Marek   Bright House Network

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

   "The asymmetric-rate 10GPASS-XR-D type PMD, transmitting in continuous mode and
   receiving in burst mode, is defined in this clause." - what data rates can we then support?

SuggestedRemedy

   if the supported data rate is asymmetric, it should be nailed down and listed rather than up
   to 10Gb/s downstream and up to 10Gb/s downstream. Can we nail it down and update the
   numbers across the whole draft?

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.1**   *P* **70**   *L* **29**   # 2440

Hajduczenia, Marek   Bright House Network

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

   EDITORS NOTE (to be removed prior to publication): at this time, it is not clear what data
   format will be used
   between the bottom of PMA and top of PMD (across PMD service interface). Text will be
   expanded when
   more information on this interface is available.

SuggestedRemedy

   This is not true anymore - data across PMA service interface will be serial and not block
   oriented. Remove the editorial note.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **100**
SC **100.2.1**

Page 3 of 41
10/21/2014 1:06:11 PM

Cl **100** *SC* **100.2.1.2** *P* **71** *L* **16** # 2444
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
EDITORS NOTE (to be removed prior to publication): data rate has to be somehow related to modulation depth. Right now it is marked as TBD

SuggestedRemedy
Remove the editorial note in lines 16-17
Change text in line 12: "at a nominal signaling speed of TBD GBd" to read "at the nominal speed in the function of the aggregate OFDM channel capacity, as defined by TBD." - TBD should likely to point where we describe the use of CVlause 45 registers for modulation profiles for individual subcarriers.

Similar change to 100.2.1.3

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.1.2** *P* **71** *L* **3** # 2441
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
This primitive defines the transfer of TBD data from the Clause 101 PMA to the Clause 100 PMD.

SuggestedRemedy
TBD should be replaced with "1 bit"
Also replace "a TBD" with "a continuous stream of bits" in line 6.
Also replace "The tx_unitparameter represents TBD." with "The tx_bit parameter can take one of two values: ONE or ZERO."
Remove the editorial note in lines 8-10.

Similar changes to be applied to 100.2.1.3

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.1.4** *P* **71** *L* **36** # 2443
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **D**
"Clause 101 transfers this signal across towards the Clause 100 without any changes. " - wording - clause does not transfer anything.

SuggestedRemedy
Change to "Clause 101 PCS transfers this signal across towards the Clause 100 PMD without any changes."

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.1.4** *P* **71** *L* **36** # 2442
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
"A signal for transmitter control is generated as described in TBD for the Clause 101 PCS" - this needs a bit more clarity to the language

SuggestedRemedy
Change to "A signal for transmitter control is generated by the Data Detector function - see TBD.".

I believe that the signal will be generated by the Data Detector function (whatever it is for EPoC).

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.10** *P* **83** *L* **17** # 2435
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
100.2.10 PMD receive function - what is the intent of this function?

SuggestedRemedy
Remove 100.2.10 PMD receive function altogether. We need CLT Tx spec, CNU Tx spec, CLT Rx and CNU Rx specs. Please revise the outline of the clause.

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **100**
SC **100.2.10**

Page 4 of 41
10/21/2014 1:06:11 PM

Cl **100**   *SC* **100.2.11.1**   *P* **83**   *L* **25**   # 2436
Hajduczenia, Marek   Bright House Network

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

What does it mean: "The OFDM signals and CNU interfaces shall have the characteristics and limitations defined in Table 100–4"

SuggestedRemedy

Probably need to revise to read "The CNU receiver shall meet electrical parameters per Table 100–4."

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.11.1**   *P* **83**   *L* **36**   # 2437
Hajduczenia, Marek   Bright House Network

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

Issues with definitions included in Table 100-4:
1) Variable Bit Loading should be removed - this should be changes into test requirements
2) remove "assuming negligible power outside this range" - if that means anything, add in the form of a note to the parameter
3) "Note: Applies when lower frequency boundary is 108 MHz" and "Note: Applies when upper frequency boundary is 1.794 GHz" should be converted into notes to specific values

SuggestedRemedy

Fix the issues per comment

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.11.2**   *P* **84**   *L* **14**   # 2438
Hajduczenia, Marek   Bright House Network

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

"The required level for CNU downstream post-FEC error ratio is defined as less than or equal to 10–6 PER (packet error ratio) with 1500 byte Ethernet packets. " - is this intended to be a requirement?

SuggestedRemedy

If this is intended to be a requirement, we need to convert to "shall"

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.11.2.1**   *P* **84**   *L* **20**   # 2439
Hajduczenia, Marek   Bright House Network

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

What is "implementation loss" and where it is defined? This is the only location where it is used and ti is subject in a shall statement.

SuggestedRemedy

Clarify what it is, or reword so that a vague term is not used.

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.11.2.1**   *P* **84**   *L* **36**   # 2896
Laubach, Mark   Broadcom Corporation

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

Table note #3 not referenced in Table 100-5 and appears to be dangling as a mistake. Suggest making it more clear that this applies to all CNR values like notes 1 and 2.

SuggestedRemedy

Line 38, replace superscript "1,2" with just "1". Page 85 Line 1 through 4, collapse into single table note 1.

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.11.3**   *P* **85**   *L* **5**   # 2881
Remein, Duane   Huawei Technologies

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

100.2.11.3 FEC codeword error rate not needed here s/b CL 101. Same for 100.2.12.2 Codeword error rate.

SuggestedRemedy

Remove sections, already in 101.3.3.2 (currently blank, see related comment on 101.3.3.2

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 5 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.11.3**   10/21/2014 1:06:11 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.3**   *P* **72**   *L* **22**   # 2388

Hajduczenia, Marek   Bright House Network

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

The text "The PMD Receive function shall convey the bits received from the MDI according to the PMD to MDI RF specifications in 100.TBD to the PMD service interface using the message PMD_UNITDATA.indication(rx_unit), creating appropriately formatted stream of bits. " makes no sense.

SuggestedRemedy

Clarify the text, breaking it into two sentences (?). Seems that "according to the PMD to MDI RF specifications in 100.TBD" should be removed?

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.4**   *P* **72**   *L* **28**   # 2387

Hajduczenia, Marek   Bright House Network

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

Insert TBD here rather than just an Editor's note. The note will be gone, and the subclause will remain empty

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.5**   *P* **72**   *L* **32**   # 2445

Hajduczenia, Marek   Bright House Network

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

"The PMD_SIGNAL.request(tx_enable) message is defined for all CNU PMDs specified in Clause 100" - I thought we only specified one PMD

SuggestedRemedy

Change to "The PMD_SIGNAL.request(tx_enable) message is defined for the CNU PMD specified in Clause 100"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.6**   *P* **72**   *L* **34**   # 2839

Remein, Duane   Huawei Technologies

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

Modulation formats also include BPSK and other optional formats.

SuggestedRemedy

List all potential modulation formats for US & DS indicating required / optional/ not supported for both MAC data path and PHY Link data path. Place new table in 100.2.6 (pg 72 ln 37) and replace text in 100.2.6 with "The EPoC PHY transmitter shall suport the mandatory modulation formats listed in Table (REF) and may support the optional formates." Remove listing in Table 100-1 (pg 75 ln 21) and ref. new table.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.6**   *P* **72**   *L* **35**   # 2403

Hajduczenia, Marek   Bright House Network

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

We specify modulation formats for transmitters only - does that imply that a receiver on both ends of the link needs to support the very same modulation formats well? Should that be specified?

SuggestedRemedy

Add specifications for supported modulation formats for CNU and CLT receivers.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.6**   *P* **72**   *L* **53**   # 2386

Hajduczenia, Marek   Bright House Network

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

"Modulation format for PHY Link is specified in Clause 102.2.1.2 and 102.3.1.2" - remove the word "Clause" - these are subclauses

SuggestedRemedy

per comment

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 6 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.6**   10/21/2014 1:06:11 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**　　　*SC* **100.2.6.1**　　　　　*P* **73**　　　*L* **1**　　　# 2906
Laubach, Mark   Broadcom Corporation

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

Need to repurpose and update 100.2.6.1 and 100.2.6.1.1 for downsteam and upstream data rate calculations based on decisions at last meeting.

SuggestedRemedy

Retitle 100.2.6.1 as new 100.2.7 "Data Rates". Create sections 100.2.7.1 Downstream, and 100.2.7.2 Upstream. Use text from laubach_3bn_11_1114.pdf

Note: the draft text is based on laubach_3bn_08_0914.pdf pages 7 and 9.

Proposed Response　　　*Response Status*　**O**

Cl **100**　　　*SC* **100.2.6.1**　　　　　*P* **73**　　　*L* **3**　　　# 2446
Hajduczenia, Marek   Bright House Network

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

"In baseline channel conditions, as defined in Annex 100A ... " - does this make this Annex normative or informative?

SuggestedRemedy

Mark Annex 100A accordingly

Proposed Response　　　*Response Status*　**O**

Cl **100**　　　*SC* **100.2.6.1**　　　　　*P* **73**　　　*L* **4**　　　# 2448
Hajduczenia, Marek   Bright House Network

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

"The MAC/PLS date rate shall scale linearly with the number of OFDM channels, in the same baseline channel conditions in each channel." - this is not testable. No need for "shall" statement here

SuggestedRemedy

"The MAC/PLS date rate scales linearly with the number of OFDM channels, in the same baseline channel conditions in each channel."

Proposed Response　　　*Response Status*　**O**

Cl **100**　　　*SC* **100.2.6.1.1**　　　*P* **73**　　　*L* **8**　　　# 2449
Hajduczenia, Marek   Bright House Network

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

100.2.6.1.1 is likely supposed to be at the same level as 100.2.6.1

SuggestedRemedy

Change 100.2.6.1.1 to 100.2.6.2
Insert TBD in this subclause and remove all empty lines in this Clause (100)

Proposed Response　　　*Response Status*　**O**

Cl **100**　　　*SC* **100.2.7.1**　　　　*P* **73**　　　*L* **16**　　　# 2907
Laubach, Mark   Broadcom Corporation

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

frequencies ranges should point to preferred table for both downstream and upstream.

SuggestedRemedy

Section 100.2.7.1 first paragraph, change "The CLT transmitter and CNU receiver shall support a range that includes from 54 MHz to 1212 MHz." to "The CLT transmitter and CNU receiver shall support a range included in the frequency band of 54 MHz to 1212 MHz as defined in Table 100-2."

Section 100.2.7.2 first paragraph, change "The CNU transmitter and CLT receiver shall support a range that includes from 5 MHz to 234 MHz." to "The CNU transmitter and CLT receiver shall support a range that included in the frequency band of 5 MHz to 234 MHz as defined in Table 100-xx.

Proposed Response　　　*Response Status*　**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 7 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.7.1**   10/21/2014 1:06:11 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100** *SC* **100.2.7.1** *P* **73** *L* **18** # 2450

Hajduczenia, Marek Bright House Network

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

The CLT transmitter and CNU receiver shall support a range that includes from 54 MHz to 1212 MHz. Equipment may be adapted to all or part of this frequency band to suit regional requirements. Equipment conforming to this standard shall clearly mark downstream frequency ranges.

A bunch of unnecessary requirements ... The first shall is already covered in Table 100–1, which is already mandatory. A separate section on PMD marking and labelling is where the second "shall" needs to be placed in

SuggestedRemedy

Change the text to read: "The CLT transmitter and CNU receiver is expected to support a frequency range from 54 MHz to 1212 MHz. Equipment may be adapted to all or part of this frequency band to suit regional requirements. Equipment conforming to this standard needs to be clearly mark the supported downstream frequency ranges."

Apply similar changes to 100.2.7.2

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.7.2.1** *P* **73** *L* **28** # 2908

Laubach, Mark Broadcom Corporation

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

Subsection no longer needed, subcarrier nulling is defined elsewhere.

SuggestedRemedy

Remove subsection "100.2.7.2.1 Carrier Nulling"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.7.2.1** *P* **73** *L* **28** # 2451

Hajduczenia, Marek Bright House Network

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

Subclause 100.2.7.2.1 is empty and should be marked with TBD.

SuggestedRemedy

Insert TBD into thsi subclause. It is not clear what specific text should go in here. Consider adding an editorial note which outlines the necessary text.

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.8.1** *P* **73** *L* **31** # 2452

Hajduczenia, Marek Bright House Network

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

No need for lengthy titles: "Definitions and assumptions for defining OFDM channel power"

SuggestedRemedy

Change to "OFDM channel power definitions"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.8.1** *P* **73** *L* **34** # 2454

Hajduczenia, Marek Bright House Network

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

Text "For an
OFDM channel there is a) the number of equivalent 6 MHz channels (N
eq), b) the encompassed spectrum, c)
the occupied bandwidth, and d) the modulated spectrum." is not needed - this section just adds definitions, as outlined in the previous sentence

SuggestedRemedy

Remove this text

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.8.1** *P* **73** *L* **34** # 2453

Hajduczenia, Marek Bright House Network

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

This section defines the terms and concepts used whenspecifying the CLT RF output requirements.

SuggestedRemedy

We use the term "subclause" and not "section" - there are at least 20 instances in the document were changes ought to be made.

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **100**
SC **100.2.8.1**

Page 8 of 41
10/21/2014 1:06:11 PM

Cl **100**   *SC* **100.2.8.1**   *P* **73**   *L* **37**   # 2456
Hajduczenia, Marek   Bright House Network

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

"Occupied bandwidth (Occupiedbandwidth) is the sum of the bandwidth (RF spectrum) in all channel frequency allocations (e.g., 6 MHz channelsize) that are occupied by the OFDM channel (OFDMchannelbandwidth). Even if one active subcarrier of an OFDM channel is placed in a given standard channel frequency allocation, that standard channel frequency allocation in its entirety is said to be occupied by the OFDM channel" - definition does not correspond to equation 100-1

SuggestedRemedy

Equation indicates that occupied bandwidth is a product of 6MHz channel size and ceiled number of 6MHz channels fitting into a single OFDM channel. That is dramatically different from the definition written in words.

Also, some vague terms without any definition and meaning "standard channel frequency allocation"

Seems that the second sentence in the definition is not connected with occupied bandwidth in any way and fits more into OFDM channel definition: Even if one active subcarrier of an OFDM channel is placed in a given standard channel frequency allocation, that standard channel frequency allocation in its entirety is said to be occupied by the OFDM channel" - either remove it or move it to definition of OFDM channel

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1**   *P* **73**   *L* **44**   # 2899
Laubach, Mark   Broadcom Corporation

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

Typos and editor note no longer needed

SuggestedRemedy

1) Change ".Occupiedbandwidth" to "Occupied bandwidth" in equation on line 44.
2) Remove editor's note on line 46.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1**   *P* **73**   *L* **44**   # 2455
Hajduczenia, Marek   Bright House Network

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

Several problems with Equation 100-1:
1) "." ahead of the equation.
2) lengthy names of parameters
3) missing definition of ceilign symbol

SuggestedRemedy

1) remove "." at the head of the equation
2) use the following variable names: O>>B<< for occupied bandwidth, C>>B<< for channel bandidth, C>>S<< for channel size
3) copy definition of ceiling from 77.2.2.4

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1**   *P* **73**   *L* **48**   # 2457
Hajduczenia, Marek   Bright House Network

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

A pretty convoluted way to express definitions. Also, we do not put examples in the middle of the definition: "The encompassed spectrum in MHz is 204.8 MHz, minus the number of subcarriers in the band edge exclusion sub-band for the upper and lower band edges (combined), multiplied by the subcarrier spacing in MHz. For example, with subcarrier spacing of 50 kHz and 150 lower band edge subcarriers and 152 upper band edge subcarriers (for a total of 302 subcarriers in the two band edge exclusion sub-bands), the encompassed spectrum = 204.8 – 302*(0.05) = 189.7 MHz. The encompassed spectrum is also equal to the center frequency of the highest frequency modulated subcarrier minus the center frequency of the lowest frequency modulated subcarrier in an OFDM channel, plus the subcarrier spacing."

SuggestedRemedy

Reword to "The encompassed spectrum is equal to the width of the OFDM channel (expressed in MHz) less subcarriers in the band edge exclusion sub-band for the upper and lower band edges (combined), multiplied by the subcarrier spacing (expressed in MHz). The encompassed spectrum may be also expressed as the difference between the center frequency of the highest frequency modulated subcarrier minus the center frequency of the lowest frequency modulated subcarrier in an OFDM channel, plus the subcarrier spacing (all expressed in MHz). For example, provided the OFDM channel of 204.8 MHz, subcarrier spacing of 50 kHz and 150 lower band edge subcarriers and 152 upper band edge subcarriers (a total of 302 subcarriers in two band edge exclusion sub-bands), the encompassed spectrum is equal to 204.8 – 302 x 0.05 = 189.7 MHz."

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 9 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.8.1**   10/21/2014 1:06:11 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.8.1**   *P* **74**   *L* **21**   # 2458
Hajduczenia, Marek   Bright House Network

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

"This standard requires that the CLT is terminated with a 75 Ohm load per Table 100-1" - what is this doing in the section of definitions? if the CLT termination requirements are already covered in Table 100-1, why repeat it?

SuggestedRemedy

Remove this text

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1.1**   *P* **74**   *L* **26**   # 2460
Hajduczenia, Marek   Bright House Network

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

Awkward wording starting with the words "For purposes of spurious emissions requirements, the "commanded transmit power per channel" for an equivalent 6 MHz channel is computed as follows:" until line 36

SuggestedRemedy

Change to the following:

CLT is configured with a number of parameters, namely:
-number of 6 MHz channels, and power level for each 6 MHz channel
-for each OFDM channel: total power for each 6 MHz channel + 10log10(Number of occupied 6 MHz channels) for that OFDM channel.
Using these configured parameters, the CLT calculates the commanded transmit power per channel for an equivalent 6 MHz channel, using the following information:
-power for data subcarrier and pilots (calculated using total number of active subcarriers),
-power in 400 kHz of spectrum containing the PHY Link,
-power calculated for the 6 MHz band centered on the PHY Link is the commanded average power of an equivalent 6 MHz channel for that OFDM channel

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1.1**   *P* **74**   *L* **41**   # 2461
Hajduczenia, Marek   Bright House Network

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

Text in line 41-44 is not really bringing into the description. Why is there?

SuggestedRemedy

Remove lines 41-47

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1.1**   *P* **74**   *L* **46**   # 2900
Laubach, Mark   Broadcom Corporation

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

editors note no longer needed

SuggestedRemedy

remove editors note

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 10 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.8.1.1**   10/21/2014 1:06:11 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.8.1.1**   *P* **75**   *L* **2**   # 2462
Hajduczenia, Marek   Bright House Network

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

Several issues with the way Table 100–1 is structured:
1) typically, we have a separate column for units - see Table 75–5 for example of that
2) missing spaces and extra spaces between number
3) row "Signal Type" is meaningless - should be removed
4) "(4K FFT)" is unnecessary - remove
5) " – number of continuous pilot tones" - if that is needed, it should be moved to the Parameter name
6) for "Level" parameter, "adjustable" is meaningless - it is defined in Table 100-2 anyway. Change to "see Table 100-2"
7) given that table 100-2 is mandatory, support for 8192-QAM and 16384-QAM is optional and should be removed from the table.
8) "Average over center 400 kHz subcarriers within gap" shoudl be moved to the parameter name, and not have it in the values
9) Notes in 802.3 specs are referenced in a different way - we do not "See Notes 4,6", look at Table 75–5 for format reference.
10) Parameters which define values in ranges, such as "Inband Spurious, Distortion, and Noise:" usually come with a graphical representation of the values in specific ranges. Please insert a chart for such parameter and point to it from within the table. Drawing is illustrative of course.
11) "[CW not processed via FFT]" - what does this mean?

SuggestedRemedy

Apply changes per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1.1**   *P* **75**   *L* **23**   # 2459
Hajduczenia, Marek   Bright House Network

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

100.2.8.1.1 should be like 100.2.8.2 - no need to make this a subclause of 100.2.8.1

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1.1**   *P* **76**   *L* **48**   # 2463
Hajduczenia, Marek   Bright House Network

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

A lot of notes under Table 100-1,/2/3 cover the testing conditions, and how individual parameters are verified in lab conditions

SuggestedRemedy

Test conditions and verification process should be described in a subclause on measurements, similar to 75.7 Definitions of optical parameters and measurement methods. This is how specs are typically structured in 802.3. We do not mix testing and measurement description in the section with requirements.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.1.1**   *P* **78**   *L* **32**   # 2901
Laubach, Mark   Broadcom Corporation

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

Line 32: wrong text font.
Line 50 and 51: extra "-"

SuggestedRemedy

Line 32: Fix text font.
Line 50 and 51: remove "-" before "channel".

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 11 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.8.1.1**   10/21/2014 1:06:11 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.8.1.1**   *P* **80**   *L* **37**   # 2902
Laubach, Mark   Broadcom Corporation

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

Table 100-3 header problem, equation should not be header. This is a framemaker problem. Also need to changing "ceiling[]" to appropriate ceiling symbol brackets.

SuggestedRemedy

Move equation out of table cell into numbered equation paragraph. Change the "ceiling[]" notation to the appropriate ceiling brackets in the equation symbol editor.

Add a new paragraph before the new equation. "Equation 100-x is used to generate the dBc values enumerated in Table l00-3. The ceiling function used in this equation 100-x rounds to the next higher 0.5 dBc. For example, the ceiling of -63.9 will produce -63.5 as a result."

Delete table note 1 on page 81 line 38 and renumber.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.2**   *P* **77**   *L* **13**   # 2464
Hajduczenia, Marek   Bright House Network

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

Text in 100.2.8.1.1 already covers a requirement: "A CLT shall output an OFDM RF modulated signal with the characteristics defined in Table 100–1,
Table 100–2, and Table 100–3." - text in line 16, page 77 is not needed (repeated).

SuggestedRemedy

Remove "A CLT shall generate an RF output with power capabilities as defined in Table 100–2"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.2**   *P* **77**   *L* **18**   # 2465
Hajduczenia, Marek   Bright House Network

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

Probably the requirement in line 17 shoudl be clarified: "The CLT shall be capable of adjusting OFDM channel RF power on a per channel basis as stated in Table 100–2." - it is not clear what it really means - "shall be capable" ...

SuggestedRemedy

Change to "The CLT shall adjust the RF power per OFCM channel per Table 100–2."

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.2**   *P* **77**   *L* **23**   # 2466
Hajduczenia, Marek   Bright House Network

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

Several issues with the way Table 100–2 is structured:
1) typically, we have a separate column for units - see Table 75–5 for example of that
2) missing spaces and extra spaces between number
3) "Required power in dBmV per OFDM channel:" - unnecessary, remove
4) what does it mean: "below required power level specified below
maintaining full fidelity over the 8 dB range" - it this matters (really), it should be placed into a section on measurement and testing requirements, and not within the table which is supposed to provide numeric values
5) what does this mean: "May: required power (in table below) to required power – 8 dB, independently on each channel." and how do we test it?
6) what does "Strictly monotonic" mean?
7) "Diagnostic carrier suppression modes" should be described in a separate section rather than making them part of this table - it is unclear what they are here for at all
8 entry for RF output port muting should contain just the number. The measurement confition - all the text you have right now - should go into the section on measurement and testing

SuggestedRemedy

Address individual comments on table 100-2

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.2**   *P* **77**   *L* **28**   # 2897
Laubach, Mark   Broadcom Corporation

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

Change "ceil[]" to appropriate symbol brackets for ceiling lines 28/29 and 32/33. Missing right parens line 32.

SuggestedRemedy

Either find an acceptable symbol font that has ceiling brackets or convert equation to Framemaker unnumbered equation.   On lin 32, change was looks like a double quote to a single quote and right parens: ')

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 12 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.8.2**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.8.2**   *P* **78**   *L* **50**   # 2467
Hajduczenia, Marek   Bright House Network

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

Meaingless requirements that are not testable: "An N
eq-channel per RF port CLT shall comply with all requirements operating with all Neq channels on the
RF port, and with all requirements for an N
eq'-channel per RF port device operating with Neq' active chan
nels on the RF port for all values of N
eq' less than Neq, where Neq' is the full set of modulated or active chan
nels."

SuggestedRemedy

The use of Neg, Neg prime is very confusing. Furthermore, what the actual purpose of this statement?

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.3**   *P* **79**   *L* **3**   # 2468
Hajduczenia, Marek   Bright House Network

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

What is "N'" in this text? "In cases where the N' combined channels ... "

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.3**   *P* **79**   *L* **4**   # 2430
Hajduczenia, Marek   Bright House Network

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

Terminology: "command" may have some meaning in DOCSIS-land, but it does not have any definition in 802.3. What does it mean? Either define it well, ot cease to use terms meaningless to readers.

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.3**   *P* **79**   *L* **50**   # 2431
Hajduczenia, Marek   Bright House Network

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

This text (starting in line 50 and ending on the top of the next page) seems like a set of definitions and should go into the subclause 100.2.8.1 and not be here.

SuggestedRemedy

Move to 100.2.8.1 and simplify the wording to break out actual definitions.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.3**   *P* **80**   *L* **35**   # 2432
Hajduczenia, Marek   Bright House Network

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

There are two equations in Table 100-3 - move them into main text, put references on them and then reference inside of teh table (if needed)

Also, do we need to denote this parameter as "N*" ? Coudl we come up with a notation that does not require special characters?

SuggestedRemedy

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.8.3**   *P* **80**   *L* **48**   # 2433
Hajduczenia, Marek   Bright House Network

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

Complex equations should not break between lines - this impedes readability

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 13 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.8.3**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.9**   *P* **81**   *L* **50**   # 2434

Hajduczenia, Marek   Bright House Network

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

Plenty of empty subclauses - all of these should be marked with TBDs to make sure that they do not spli through cracks.

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.5**   *P* **87**   *L* **14**   # 2879

Remein, Duane   Huawei Technologies

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

100.5 Channel characteristics
100.5.1 Coaxial cabling model
100.5.2 Coaxial cable
100.5.3 Coaxial connectors
100.5.4 Medium dependent interface (MDI)
Only need MDI as the rest s/b covered in the Channel Model

SuggestedRemedy

Remove sections 100.5.x except 100.5.4. Promote 100.5.4 to 100.5

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **101.3.2.6**   *P* **113**   *L* **39**   # 2909

Laubach, Mark   Broadcom Corporation

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

Scrambler being moved from PCS to PMA.   Need to clarify synchronization and initialization to downstream frame.

Section 101.4.3.6 Symbol Mapper introduction, needs to be updated for PMA_UNITDATA.request information, as well as symbol mapper use and initialization, as well as NCP calculation.

SuggestedRemedy

As per laubach_3bn_12_1114.pdf:
1) Section 101.3.2.6 moved to Section 101.4.3.6.4
2) 101.4.3.6.1 Introduction updated
3) 101.4.3.6.5 "NCP calculation" added

Proposed Response   *Response Status* **O**

Cl **100A**   *SC* **100A**   *P* **273**   *L* **1**   # 2514

Hajduczenia, Marek   Bright House Network

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

Extra 2014 in the title, again

SuggestedRemedy

Remove

Proposed Response   *Response Status* **O**

Cl **100A**   *SC* **100A**   *P* **273**   *L* **1**   # 2530

Hajduczenia, Marek   Bright House Network

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

The purpose of this Annex is unclear - 802.3 does not typically specify channel in such a detail, but rather we point to external documents that already provide normative description of the channel.
In this case, I would suggest we point to definition of the said channel (I do nto think downstream and upstream tables were developed for EpoC specifically) and avoid documenting stuff that does not really have a place in 802.3 standards.

SuggestedRemedy

Remove Annex 100A.

Proposed Response   *Response Status* **O**

Cl **100A**   *SC* **CV.2**   *P* **273**   *L* **10**   # 2515

Hajduczenia, Marek   Bright House Network

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

Titles and template of this Annex is off. Please use the official template

SuggestedRemedy

Update headings in this annex to match proper numbering. Fix figure numbering.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100A**   Page 14 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **CV.2**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **100A**   *SC* **CV.2**   *P* **273**   *L* **46**   # 2529
Hajduczenia, Marek   Bright House Network

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

Is there any need to show OLT in this drawing? It is not clear where CCDN is, where CLT and CNU are located. The purpose of this figure is very questionable at this time.

SuggestedRemedy

Either demonstrate target CCDN architectures, with CNU and CLT in target locations and all passive devices in target places, or remove altogether. It is not clear what this figure is for right now. Note that this figure does not demonstrate any performance, does not set reference points, and does not really define any topology which would be normative for Clause 100.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.1**   *P* **89**   *L* **5**   # 2860
Remein, Duane   Huawei Technologies

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

Need to expand mapping table for variable to Cl 45 registers

SuggestedRemedy

See remein_3bn_14_1114.pdf

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.1**   *P* **96**   *L* **11**   # 2861
Remein, Duane   Huawei Technologies

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

Link to Cl 76 can be live

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.3**   *P* **108**   *L* **40**   # 2904
Laubach, Mark   Broadcom Corporation

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

If approved in another comment, the Scrambler will move to the PMA Symbol Mapper. The bottom of the figure then needs to be updated as well as incorporate new process into FEC encoder that performs PMA Client function directly given data paths are a bit stream.

SuggestedRemedy

Replace the "Scrambler" text from the bottom box in the figure and replace with "Transmit To PMA".

As per laubach_3bn_13_1114.pdf page 1:
1) Add new variables to 101.3.2.5.9 Variables
2) Add new function to 101.3.2.5.10 Functions
3) Add new figure 101-10 for Transfer to PMA.

As per laubach_3bn_14_1114.pdf:
1) Add transferToPMA()to bottom of CALCULATE_CRC40_AND_PARITY state and fix typo, change FEC_DS_CodeWordSize to Fc

Section 100.1.4, Page 68, Line 17: remove Gearbox functional block, no longer needed in downstream as per 49.2.7.

Seciton 101.3.3.1.3, Page 116, Line 39. Change remove box and (DE)SCRAMBLER, replace with PMA_UNITDATA.indication()

As per laubach_3bn_17_1114.pdf:
1) Add and update to 101.3.3.1.4 Variables
2) Add function to 101.3.3.1.5 Functions
3) Add new figure before Figure 101-12 for Transfer from PMA

Section 101.3.3.1.7, Page 116, line, replace state diagram with laubach_3bn_18_1114.pdf. This fixes changes that should have been submitted last comment round for remove CQ blocking. This adds:
1) call to transferFromPMA()
2) corrects FEC counters as per text remedy in earlier comment this found

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **101**   Page 15 of 41
SC **101.3.2.5.3**   10/21/2014 1:06:12 PM

Cl **101**   *SC* **101.3.2.6**   *P* **114**   *L* **25**   # 2882

Remein, Duane   Huawei Technologies

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

EDITORS NOTE (to be removed prior to publication): the phrase "first codeword of the DS frame is ambiguous. is this coincident with the Timestamp or the first subcarrier of the OFDM column containing the PHY Link Preamble or sometime else?

SuggestedRemedy

Remove note, the description is correct. Change "initialized" to "initializes" on line 21

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.3.1.2**   *P* **115**   *L* **25**   # 2862

Remein, Duane   Huawei Technologies

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

We indicate there is a user configurable variable but never identify it.

SuggestedRemedy

Create a variable CRC40ErrCtrl and include in MDIO Mapping table (see remein_3bn_14_1114.pdf).
Change wording from:
The FEC decoder in the CNU shall provide a user-configurable option to indicate an uncorrectable FEC codeword (due to an excess of symbols containing errors) to higher layers. 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 replaces bit <0> and <1> in the sync headers in all 64B/66B blocks with the binary value of "11". 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 an error to the PCS by replacing bit <0> and <1> in the sync header with the binary value of "11" in the first 64B/66B block and every 8th 64B/66B block, e.g. 1st, 9th, 17th, 25th, etc. as well as the last 64B/66B block from the errored FEC codeword.
To:
The FEC decoder in the CNU shall provide a user-configurable option (variable CRC40ErrCtrl) to indicate an uncorrectable FEC codeword (due to an excess of symbols containing errors) to higher layers. If CRC40ErrCtrl is enabled and the calculated value of CRC40 does not match the value of CRC40 retrieved from the received FEC codeword, the FEC decoder replaces bit <0> and <1> in the sync headers in all 64B/66B blocks with the binary value of "11". If CRC40ErrCtrl 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 an error to the PCS by replacing bit <0> and <1> in the sync header with the binary value of "11" in the first 64B/66B block and every 8th 64B/66B block, e.g. 1st, 9th, 17th, 25th, etc. as well as the last 64B/66B block from the errored FEC codeword.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.3.1.7**   *P* **119**   *L* **13**   # 2910

Laubach, Mark   Broadcom Corporation

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

1) Line 12-15 FEC statistics counter initialization in the wrong place.
2) Line 41, both FEC statistics increments are inside the block count loop, these each need to be moved to a separate state placed between DECODE_CALCULATE_CRC40 and DECODE_FAIL and DECODE_SUCCESS to be outside the loop.

SuggestedRemedy

1) Move the lines:
"FecCodeWordCount <= 0
FecCodeWordFail <= 00
FecCodeWordSuccess <= 0"
inti the INIT block.
2) Create a new state between DECODE_CALCULATE_CRC40 and DECODE_FAIL, labeled COUNT_FAIL. Move FecCodeWordFail ++ from DECODE_FAIL to the new COUNT_FAIL. Exit COUNT_FAIL to DECODE_FAIL with a UCT. Create a new state between DECODE_CALCULATE_CRC40 and DECODE_SUCCESS, labeled COUNT_SUCCESS. Move FecCodeWordSuccess ++ from DECODE_SUCESS to the new COUNT_SUCCESS. Exit COUNT_SUCCESS to DECODE_SUCCESS with a UCT. Note these changes may take some creative rearranging of the diagram to fit on one page.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.3.1.7**   *P* **119**   *L* **9**   # 2864

Remein, Duane   Huawei Technologies

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

Seems odd that FecCodeWordCount, FecCodeWordFail, & FecCodeWordSuccess get reset on every FEC codeword that is decoded.

SuggestedRemedy

Move these assignments to INIT state. Author to verify these then don't get reset if we loose FEC alignment.

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **101**   Page 16 of 41
SC **101.3.3.1.7**   10/21/2014 1:06:12 PM

Cl **101**   *SC* **101.3.3.2**   *P* **120**   *L* **26**   # 2883
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
Blank section.

SuggestedRemedy
Move the para from pg 115 ln 25 starting "The FEC decoder in the CNU shall provide a user-configurable option to indicate … " to 101.3.3.2.
Replace the moved test in 101.3.3.1.2 with "The FEC decoder maintains error monitors to detect FEC codeword successes and failures. See 101.3.3.2 for details.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.2.1.2**   *P* **124**   *L* **24**   # 2876
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
See related comment against 45.2.1.122 pg 44 ln22
Add US/DS data rate variable to mdio mapping table

SuggestedRemedy
Shorten names to DS_DataRate & US_DataRate. see remein_3bn_14_1114.pdf

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.2.2.1**   *P* **125**   *L* **8**   # 2865
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
This sentence makes it sound like we use burst transmission in the DS direction: "In the downstream direction, the burst received by the CNU is always a single FEC codeword of size FEC_DS_CodeWordSize bits."

SuggestedRemedy
Reword to:
"In the downstream direction, the continuous data stream received by the CNU is always composed of single FEC codewords of size FEC_DS_CodeWordSize bits."

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.2.5**   *P* **124**   *L* **52**   # 2870
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
It is not clear what is meant by the statement "PMA_UNITDATA.indication is used by the client's synchronization process."

SuggestedRemedy
Add ed note after the para: EDITORS NOTE (to be removed prior to publication): a precise description of what is meant by "PMA_UNITDATA.indication is used by the client's synchronization process" is needed.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.2.7.3**   *P* **139**   *L* **14**   # 2842
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
Given that this is a standard and not an implementation does this have any meaning? "approximately equal number of rows vs. columns works well"

SuggestedRemedy
Strike the sentence.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.1**   *P* **125**   *L* **43**   # 2866
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
The parenthetical "(excluded subcarrier)" is confusing in this context as adjacent channels will likely have overlapping excluded carriers.

SuggestedRemedy
Remove the parenthetical.

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 17 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.4.3.1**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **101**   *SC* **101.4.3.1**   *P* **125**   *L* **50**   # 2887
Remein, Duane   Huawei Technologies

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

Editors note on number of channels is not longer needed.

SuggestedRemedy

Remove Editors note.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.10**   *P* **144**   *L* **40**   # 2868
Remein, Duane   Huawei Technologies

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

This statement should refer to a system variable "NCP represents the DS cyclic prefix
parameter [Tsd] as select from 10GPASS-XR DS OFDM control register (see 45.2.1.108)
for the CLT." Nor should we use another name (Tsd) to refer to the same variable. Lastly
we need to distinguish US from DS.

SuggestedRemedy

Change to read:
"The variable DS_Ncp represents the provisioned duration, in OFDM clocks, of the DS
cyclic prefix parameter (see Table Ref) for the CLT."
Replace two instances of Tsd with DS_Ncp & US_Ncp (Table 101–12 & Table 101–20
resp).
Replace "NCP" with DS_Ncp" in this section (about 32 instances) and with US_Ncp in
section 101.4.4.13. Note this removes painful subscripting.
(see mdio mapping table in remein_3bn_14_1114.pdf)

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.10**   *P* **144**   *L* **46**   # 2869
Remein, Duane   Huawei Technologies

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

This statement should refer to a system variable "The NRP samples at the start of this N-
point IDFT are copied and appended …". Also need to distinguish DS from US.

SuggestedRemedy

Change to read:
"The variable DS_Nrp represents the samples at the start of this N-point IDFT are copied
and appended ..."
Replace two instances of Tsd with DS_Nrp & US_Nrp (Table 101–13 & Table 101–21
resp).
Replace NRP with DS_Nrp in this section (about 32 instances) and with US_Nrp in section
101.4.4.13. Note this removes painful subscripting.
(see mdio mapping table in remein_3bn_14_1114.pdf)

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.2**   *P* **126**   *L* **31**   # 2888
Remein, Duane   Huawei Technologies

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

1Change (4.8828125 ns) to

SuggestedRemedy

(1/204.8MHz)

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.4**   *P* **128**   *L* **43**   # 2912
Remein, Duane   Huawei Technologies

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

Text and figure for DS framing

SuggestedRemedy

see remein_3bn_16_1114.pdf

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 18 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.4.3.4**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **101**   *SC* **101.4.3.5.3**   *P* **131**   *L* **14**   # 2840

Remein, Duane   Huawei Technologies

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

Figure 101–16—"Placement of predefined continuous pilots around the PHY Link" implies PHY Link is 6 MHz wide ("PHY Link band (6 MHz))" when in fact it is only 400 kHz. The 6 MHz band extends beyond the upper and lower continuous pilots.

SuggestedRemedy

Combine with figure 102-9, place in Cl 102 and ref from here. (see remein_3bn_12_1114.pdf for new figure)

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.5.4**   *P* **133**   *L* **54**   # 2911

Laubach, Mark   Broadcom Corporation

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

Step 7 is normative.

SuggestedRemedy

Remove the word "Informational"

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.9**   *P* **144**   *L* **31**   # 2867

Remein, Duane   Huawei Technologies

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

This statement should refer to a system variable not the whole register: "Once the CNU detects the downstream PHY Link and receives the downstream PHY Link control register (see 45.2.1.113), the CNU knows the location of k = 0.

SuggestedRemedy

Change to read:
"Once the CNU detects the downstream PHY Link and receives the DS_FreqCh1 variable (see Table ref), the CNU knows the location of k = 0."" Add DS_FreqCh1 through DS_FreqCh5 to mdio mapping table (see remein_3bn_14_1114.pdf)."

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.3**   *P* **149**   *L* **46**   # 2874

Remein, Duane   Huawei Technologies

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

This paragraph can be better aligned with agreed upon terms and variable names.

SuggestedRemedy

Change From:
"The upstream OFDMA frame shall be composed of a Probe opportunity followed by 256 OFDMA frames. Each Probe opportunity may be five or six OFDMA symbols in duration. An OFDMA frame is one Resource Block column (i.e., one column of Resource Blocks over the entire upstream spectrum). Each Resource Block is composed of one subcarrier and has a duration, which is identical to the time interleaver period, of either 8 or 16 symbols. See US time interleaving parameter in the 10GPASS-XR US OFDM control register 45.2.1.110.2. Changing the Resource Block duration results in a network restart. The superframe structure is illustrated in Figure 101–25."
To:
"The upstream OFDMA frame shall be composed of a Probe Period followed by 256 OFDMA frames. Each Probe Period may be five or six OFDMA symbols in duration, as determined by the PrbDur variable. An OFDMA frame is one Resource Block column (i.e., one column of Resource Blocks over the entire upstream spectrum). Each Resource Block is composed of one subcarrier and has a duration, which is identical to the time interleaver period as set using the US_TmIntrlv variable, of either 8 or 16 symbols. Changing the Resource Block duration results in a network restart. The superframe structure is illustrated in Figure 101–25."

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.3.2**   *P* **150**   *L* **45**   # 2903

Laubach, Mark   Broadcom Corporation

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

"OFDMA transmission may be interrupted" can be interpret as interrupting the RF transmission energy (the transmission of an OFDMA symbol).

SuggestedRemedy

Suggest replacing: "However, an OFDMA transmission may be interrupted for various reasons." with "An OFDMA tranmission may straddle excluded and unused subcarriers."

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 19 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.4.4.3.2**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **101**　　*SC* **101.4.4.3.2**　　　　　*P* **150**　　　*L* **47**　　　*#* 2890
Remein, Duane　　　　　　　　　　　Huawei Technologies

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

In 101.4.4.3.2 we define a bands edge. I believe this is the same as spectral edge used in 101.4.3.5.4. We should be consistent.

SuggestedRemedy

Change band edge to spectral edge. Remove editors note pg 133 ln 40

Proposed Response　　　*Response Status*　**O**

Cl **101**　　*SC* **101.4.5**　　　　　　*P* **159**　　　*L* **33**　　　*#* 2841
Remein, Duane　　　　　　　　　　　Huawei Technologies

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

Figure 101–29 needs to be converted to native framemaker format.

SuggestedRemedy

per comment see remein_3bn_19_1114.pdf

Proposed Response　　　*Response Status*　**O**

Cl **102**　　*SC* **1.7**　　　　　　　*P* **175**　　　*L* **16**　　　*#* 2535
Leo, Montreuil　　　　　　　　　　　Broadcom

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

We need a figure to illustrate the symbol duplication process

SuggestedRemedy

Attachment has the figure.

Proposed Response　　　*Response Status*　**O**

Cl **102**　　*SC* **102.1.1**　　　　　*P* **168**　　　*L* **10**　　　*#* 2843
Remein, Duane　　　　　　　　　　　Huawei Technologies

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

In Figure 102-2 the order of fields in the EPFH is not the same as in the DS EPFH. It would be better if they were the same

SuggestedRemedy

Swap RT/SA(16b) and RF_ID so they are in the same order as in the DS message.

Proposed Response　　　*Response Status*　**O**

Cl **102**　　*SC* **102.1.2**　　　　　*P* **169**　　　*L* **6**　　　*#* 2844
Remein, Duane　　　　　　　　　　　Huawei Technologies

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

Figure 102-3 & 4 change red text to black. Align with Figure 100-2/3. Add TxPre signal to Preamble block.

SuggestedRemedy

per comment, see remein_3bn_19_1114.pdf

Proposed Response　　　*Response Status*　**O**

Cl **102**　　*SC* **102.1.9**　　　　　*P* **175**　　　*L* **38**　　　*#* 2871
Remein, Duane　　　　　　　　　　　Huawei Technologies

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

Updates to Table 102–3—10GPASS-XR MDIO/PHY Link variable mapping

SuggestedRemedy

See remein_3bn_13_1114.pdf

Proposed Response　　　*Response Status*　**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general　　　　　　*Cl* **102**　　　　　Page 20 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed Z/withdrawn　　　*SC* **102.1.9**　　　10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.1.9**   *P* **176**   *L* **26**   # 2872

Remein, Duane   Huawei Technologies

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

Allowed CNU_ID or Next CNU_ID?

SuggestedRemedy

Go with Allowed CNU ID in Cl 45 and AllwdCNU_ID in Cl 102 (change in 4 places including Table 102-3.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.2**   *P* **177**   *L* **1**   # 2884

Remein, Duane   Huawei Technologies

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

Where is DS Timestamp generation described? Need text.

SuggestedRemedy

See 102.2.5.2 in remein_3bn_10_1114.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.2**   *P* **177**   *L* **1**   # 2886

Remein, Duane   Huawei Technologies

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

We should add a maximum allowed turn around time on the DS PHY Link so that we can ensure messages with time sensitive information, such as PHY Discovery Instructions, arrive with sufficient time to be decoded and acted upon.

SuggestedRemedy

Add new section 102.2.5 Downstream PHY Link response time. The CNU shall decode and be capable of acting on instructions included in a downstream PHY Link frame, such as PHY Discovery instructions, within TBD us.

Included the following in Variable Def. section for DS PHY Link.
PhyLnkRspTm
TYPE: 16-bit Integer
The value of this variable defines the minimum time, in OFDM clocks, after receiving the last bit of the FEC, needed by the CNU to decode and prepare the response to a PHY Link Instruction.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.2**   *P* **177**   *L* **1**   # 2892

Remein, Duane   Huawei Technologies

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

Need state diagram and related definitions for CLT PHY Link transmit process.

SuggestedRemedy

See Figure 102-1 and related text in remein_3bn_10_1114.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.2.1.2**   *P* **177**   *L* **20**   # 2837

Remein, Duane   Huawei Technologies

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

Assuming we create the suggested new table listing modulation foramts (see remein_3bn_11_114.pdf) then we shouldn't restate a requirement here.

SuggestedRemedy

Change:
"The DS PHY Link shall use a 16-QAM constellation for all information subcarrier s."
To:
"The DS PHY Link uses a 16-QAM constellation for all information subcarriers as specified in Table 100-REF. In 102.3.1.2 add The US PHY Link may use any of the modulation formats listed in Table 100-REF."

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.2.1.2**   *P* **177**   *L* **43**   # 2849

Remein, Duane   Huawei Technologies

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

Figure 102–9—"DS PHY Link spectrum placement" show minimum of 24 MHz of active subcarriers but this has been changed to 22 MHz.
See relate comment
Cl 100,
SC 101.4.3.5.3
pg 131
ln 14

SuggestedRemedy

s/b 22 MHz not 24, combine with Fig 101-16 and ref from Cl 101. See remein_3bn_12_1114.pdf.

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 21 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.2.1.2**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.2.3.1.1**   *P* **182**   *L* **36**   # 2852
Remein, Duane   Huawei Technologies

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

In this statement about Response Frame we still need to specify RF for Fine Ranging as CNUs that have already completed PHY Discovery will still supply and ACK via the PHY Link. "When the Response Type field indicates Fine Ranging / PHY Discovery the Response Frame should be set to zero and is ignored on reception as these signaling types have fixed starting points."

SuggestedRemedy

Strike the sentence.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.2.3.1.2**   *P* **183**   *L* **32**   # 2851
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **D**
Figure 102-13 needs to be converted to FrameMaker native format

SuggestedRemedy

Per comment, see remein_3bn_19_1114.pdf

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.3**   *P* **185**   *L* **19**   # 2893
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
Need state diagram and related definitions for CNU PHY Link transmit process.

SuggestedRemedy

See Figure 102-2 and related text in remein_3bn_10_1114.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.3.3**   *P* **186**   *L* **50**   # 2875
Remein, Duane   Huawei Technologies

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

Why is this statement here? There is not data in a FR response.
"For Fine Ranging data transfers the upstream PHY Link shall use a (362,272) binary punctured LDPC code described in 102.1.4.2.3"

SuggestedRemedy

Remove the statement and all text and figures regarding the (362,272) binary punctured LDPC code described in 102.1.4.2.3

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.4.1.1**   *P* **188**   *L* **9**   # 2847
Remein, Duane   Huawei Technologies

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

In Figure 102-15 we should make it clear that the RND Delay is in both time and frequency domain. We should also update it to current bring-up process: 1) CLT Opens PHY Discovery
2) CNU issues PHY Discovery response
3) CLT assigns CNU_ID, sets Timing Offset and Amplitude Offset via PHY Instruction
4) CLT assigns Fine Ranging Slot to new CNU
5) CNU sends Fine Ranging Response
6) CLT updates Timing Offset and/or Amplitude Offset via PHY Instruction
7) Iterate 4-6 as needed
8) CLT schedules CNU Probe
9) CNU sends Probe response
10) CLT updates Timing Offset and/or Amplitude Offset via PHY Instruction
11) Iterate 8-10 as needed
12) CLT sets CNU to Link-up state
13) CNU ACK's Link-up in PHY Link (note this is the first CNU transmission in PHY Link or MAC data paths)

SuggestedRemedy

See remein_3bn_19_1114.pdf

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 22 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.4.1.1**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.4.1.3**   *P* **189**   *L* **11**   # 2845
Remein, Duane   Huawei Technologies

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

Perhaps we should not leave this specifically up to the implementor. "The periodicity of these windows is unspecified and left up to the implementor."

SuggestedRemedy

Change the sentence to read: "The periodicity of these windows is unspecified."

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.4.1.4**   *P* **189**   *L* **50**   # 2895
Remein, Duane   Huawei Technologies

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

Need a convention for numbering and referencing PHY Discovery opportunities as there may be upto 16 per Probe Period. This ties in wth the back-off mechanism.

SuggestedRemedy

See figure 1012-16 in remein_3bn_19_1114.pdf.

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.4.1.4**   *P* **190**   *L* **1**   # 2848
Remein, Duane   Huawei Technologies

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

Clarification of highlighted text on back-off algorithm for PHY Discovery response.

SuggestedRemedy

Change from:
"In order to reduce transmission overlaps, a contention algorithm is used by all off-line CNUs. Measures are taken to reduce the probability for overlaps by artificially simulating a random distribution of distances from the CLT. Each CNU waits a random amount of time before transmitting the PHY Discovery Response that is shorter than the length of the 100.x.y window. Multiple valid PHY Discovery Responses that do not overlap in time may be received by the CLT during a single PHY Discovery window."
To:
"In order to reduce transmission overlaps, a contention algorithm is used by all off-line CNUs. Measures are taken to reduce the probability for overlaps by artificially introducing a random distribution in the Discovery response opportunity used by each CNU. Each CNU selects a random number of Discovery response opportunities it waits before transmitting the PHY Discovery Response. Multiple valid PHY Discovery Responses that do not overlap in time may be received by the CLT during a single PHY Discovery window depending on the modulated spectrum of OFDM channel 0."

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.4.1.4**   *P* **190**   *L* **50**   # 2894
Remein, Duane   Huawei Technologies

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

Need state diagram and related definitions for CNU Discovery Response transmit process.

SuggestedRemedy

See Figure 102-2 and related text in remein_3bn_10_1114.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 23 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.4.1.4**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.4.1.5**   *P* **191**   *L* **19**   # 2885
Remein, Duane   Huawei Technologies

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

This figure reference is incorrect. "PHY Discovery Response (illustrated in Figure 102–20)." Need to add figure and reassign reference

SuggestedRemedy

Add figure per Leo Montreuil and ref. from here.

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.4.1.5**   *P* **191**   *L* **33**   # 2846
Remein, Duane   Huawei Technologies

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

Figure 102-16 title is incorrect

SuggestedRemedy

Change to "PHY Discovery Preamble generator."

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.4.2**   *P* **192**   *L* **18**   # 2878
Remein, Duane   Huawei Technologies

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

See related cmt Cl 45.2.1.122 pg 44 ln 46
EDITORS NOTE (to be removed prior to publication): need to create a mdio register for RangingOffset (signed number same size as PhyTimingOffset) which defaults to zero. This is to allow the operator to set the distance to the coax cable distribution network in the event there is an analogue optical link between the CLT and coax cable distribution network.

SuggestedRemedy

Don't need sign bit. See remein_3bn_15_1114.pdf, remove Ed Note.

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.4.3**   *P* **192**   *L* **21**   # 2891
Remein, Duane   Huawei Technologies

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

A way is needed to schedule the Probe Period.

SuggestedRemedy

See remein_3bn_02_1014.pdf (diff version compared to Draft 1.1 text is remein_3bn_021014CMP.pdf)

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103**   *P* **201**   *L* **1**   # 2502
Hajduczenia, Marek   Bright House Network

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

Tile contains "2014" for some reason. "103. 2014Multipoint MAC Control for EPoC".

SuggestedRemedy

Fix it - there are more instanced in the draft where "2014" appears without any reason.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **201**   *L* **17**   # 2503
Hajduczenia, Marek   Bright House Network

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

"The EPoC topology is similar to the P2MP topology of EPON with the optical line terminal being replaced by a cable line terminal (CLT), the optical network units replaced by cable network units (CNU) and operating over a coaxial network rather than an optical network." Acroyms already defined in previous para

SuggestedRemedy

Remove acronym expansions - already defined in previous para.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **103**   Page 24 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **103.1**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **103**   *SC* **103.1**   *P* **201**   *L* **24**   # 2519
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
"EPoC uses FDD technology; downstream and upstream directions are separated in frequency." - unnecessary detail for MPCP Clause

SuggestedRemedy
Remove.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **201**   *L* **33**   # 2520
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
"This clause specifies the multipoint control protocol (MPCP) to operate a coax cable multipoint network by defining a Multipoint MAC Control sublayer as an extension of the MPCP defined in Clause 77 and of the MAC Control sublayer defined in Clause 31 , and supporting current and future operations as defined in Clause 31 and annexes." - given that it is an independent Clause, whether it is extension of Clause 77 or not does not matter.

SuggestedRemedy
Change to read

"This clause specifies the multipoint control protocol (MPCP) to operate a coax cable multipoint network by defining a Multipoint MAC Control sublayer as an extension of the MAC Control sublayer defined in Clause 31, and supporting current and future operations as defined in Clause 31 and annexes."

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **201**   *L* **46**   # 2504
Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**
Missing full stop

SuggestedRemedy
Per comment.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **202**   *L* **20**   # 2521
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
CDN or CCDN? There are just two uses of CDN in the document right now, versus 23 uses of CCDN.

SuggestedRemedy
Change two stranded instances of CDN to CCDN.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **202**   *L* **25**   # 2522
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
The Multipoint MAC Control functionality shall be implemented for subscriber access devices containing point-to-multipoint Physical Layer devices defined in Clause 100, Clause 101 and Clause 102.

Only Clause 100 defines PHY. 101 is PCS and 102 is parallel to PCS

SuggestedRemedy
Change to

The Multipoint MAC Control functionality shall be implemented for subscriber access devices containing point-to-multipoint Physical Layer devices defined in Clause 100.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1.2**   *P* **204**   *L* **1**   # 2523
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
Several issues with Figure 103-2:
1) PMA clause is marked as TBD - I believe PMA is already defined in Clause 100 to some degree
2) no Clause 102 in the drawing?
3) COAX medium is CCDN defined elsewhere

SuggestedRemedy
Address individual issues

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **103**   Page 25 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **103.1.2**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **103** *SC* **103.1.2** *P* **205** *L* **32** # 2505
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **D**
Font in "Multipoint Transmission Control 103.2.2", "Control Parser 103.2.2" and "Control Multiplexer 103.2.2" seems to be different than other font in the drawing.

SuggestedRemedy
Align font for all elements in the drawing.

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.1.5** *P* **206** *L* **27** # 2506
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **D**
Formatting got messed up: compare text from lines 27-37 with 802.3-2012, 77.1.5, page 659

SuggestedRemedy
Please fix the formatting.

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.1** *P* **207** *L* **4** # 2516
Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **D**
More messed up formatting. Seems that all special formatting from 77.2.1 was lost when creating Clause 103.

SuggestedRemedy
Copy Clause 77 from 802.3-2012 (even even better, from 802.3bx) and apply any necessary changes, *without* making changes into formatting of alerady existing text. There are way too many formatting changes in Clause 103 relative to Clause 77 to comment on them separately.

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2** *P* **210** *L* **18** # 2517
Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **D**
Is there any legitimate reason why all existing live cross-references from 802.3-2012 text were removed and replaced with green text? It does not hurt to keep them active, as long as they poitn to a correct location in 802.3. Only new cross refrences to subclauses outside of the draft need to be places as text and marked in green for insertion of cross references later on.

SuggestedRemedy
Recover all live cross references taken from 802.3-2012 text and mark into green only cross references added new in this document.

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2** *P* **211** *L* **25** # 2524
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
Editorial Note:In Figure 102-8 the baseline material did not include the "(n)" for "transmitAllowed", the editor will add a comment to formalize this change.

SuggestedRemedy
Add the missing "(n)" after "transmitAllowed" signal in Figure 103-8.
Remove editorial note lines 25-26.

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2.7** *P* **219** *L* **36** # 2850
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **D**
Missing text in Figures 103-10 & 103-11.

SuggestedRemedy
Revel text below note:"Refer to Annex 31A for list of supported opcodes and timestamp opcodes."

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line
Cl **103**
SC **103.2.2.7**
Page 26 of 41
10/21/2014 1:06:12 PM

Cl **103**   *SC* **103.2.2.7**   *P* **221**   *L* **1**   # 2531
Hajduczenia, Marek   Bright House Network

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

Figure 103–12 and Figure 103–13 do not correspond to the current state of PCS defined in
Clause 101. These two figures, associated variables, functions, etc. should be marked as
TBD at this time.

SuggestedRemedy

Remove 103-12, 103-13 and associated variables. The process of calculating PHY
overhead with current FEC arrangement defined in CLause 101 has not been discussed,
and the model adopted from Clause 77 will present a number of challenges, as discussed
at the last meeting.

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.2.1**   *P* **224**   *L* **1**   # 2507
Hajduczenia, Marek   Bright House Network

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

Incorrect format of NOTE

SuggestedRemedy

Please apply proper styles to NOTEs in text.

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.2.3**   *P* **224**   *L* **34**   # 2508
Hajduczenia, Marek   Bright House Network

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

EPOC should be EPoC

SuggestedRemedy

Per comment

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.2.4**   *P* **224**   *L* **36**   # 2532
Hajduczenia, Marek   Bright House Network

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

Delay requirements for MPCP running in EPoC has not been examined in any detail so far,
and adopting them verbatim from EPON might prove challenging.

SuggestedRemedy

Replace all numbers in 103.3.2.4 with TBD

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.3**   *P* **224**   *L* **49**   # 2533
Hajduczenia, Marek   Bright House Network

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

The description of the discovery process assumes that the upstream burst structure, as
well as key parameters to be exchanged between the CLT and CNU par 1:1 with the
process in EPON. However, we do not really have any information on the upstrea burst
structure (cannot locate it for now in PCS clause) or a formulated idea on what parameters
need to be exchanged between the CLT and CNU to acomplish successfully discovery
over CCDN.

SuggestedRemedy

Remove content of 103.3.3 and mark it as TBD at this time. Only when details of upstream
transmission are ironed out, bring the *updated* text back.
Right now, MPCP gives impression that it is largely done, while in fact it contains a lot of
material that is not in sync with PCS / PHY definitions.

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.3**   *P* **224**   *L* **50**   # 2525
Hajduczenia, Marek   Bright House Network

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

The description of the discovery process implies that CNUs are discovered by the CLT, just
like in EPON. However, there is no indication that the CNU needs to be first discovered via
PHY link (Clause 102) before MPCP processes kick in and register the station at the MAC
Control layer.

SuggestedRemedy

Please insert at least a statement indicating that before the MPCP discovery is started,
PHY Link discovery for the given CNU needs to be completed, along with the ponter where
the process is described in detail.

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **103**   Page 27 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **103.3.3**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **103**　　*SC* **103.3.4.2**　　　　*P* **240**　　　*L* **24**　　　# 2509
Hajduczenia, Marek　　　　　　　Bright House Network

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

"VALUE: 0x002FAF08 (50 ms, default value)" got shifted to left side of the page. Compare where it is set in mpcp_timeout variable above.

SuggestedRemedy

Align formatting

Proposed Response　　　*Response Status*　**O**

Cl **103**　　*SC* **103.3.5**　　　　*P* **243**　　　*L* **3**　　　# 2526
Hajduczenia, Marek　　　　　　　Bright House Network

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

This is not really true in EPoC, where multiple carriers are used simultanously, each modulated with its own data stream.

A key concept pervasive in Multipoint MAC Control is the ability to arbitrate a >>>single transmitter<<< out of a plurality of CNUs. The CLT controls a CNU's transmission by the assigning of grants.

SuggestedRemedy

Probably we need to change teh wording to mention multiple RF transmitters located at one CNU, or come up with some aggregate term distinct from transmitter.

Proposed Response　　　*Response Status*　**O**

Cl **103**　　*SC* **103.3.5.1**　　　　*P* **244**　　　*L* **2**　　　# 2527
Hajduczenia, Marek　　　　　　　Bright House Network

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

Given the higher complexity of EPoC transmission process, including FEC encoding, is it viable to assume that the minimum processing time stays the same as in EPON:

VALUE: 0x00000400 (16.384 us)

SuggestedRemedy

Either change to a value that is viable for EPoC, or replace the numeric value with TDB

The same applies to minGrantLength variable

Proposed Response　　　*Response Status*　**O**

Cl **103**　　*SC* **103.3.5.2**　　　　*P* **244**　　　*L* **25**　　　# 2510
Hajduczenia, Marek　　　　　　　Bright House Network

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

Is there any reason why text in BurstOverhead variable is marked in yellow?

SuggestedRemedy

Remove the special color from the text and trailing " character as well.

Proposed Response　　　*Response Status*　**O**

Cl **103**　　*SC* **103.3.6.1**　　　　*P* **253**　　　*L* **10**　　　# 2511
Hajduczenia, Marek　　　　　　　Bright House Network

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

Lines 10 and 11 should have a format of NOTE ...

SuggestedRemedy

Apply the proper format of NOTE

Proposed Response　　　*Response Status*　**O**

Cl **103**　　*SC* **103.3.6.2**　　　　*P* **254**　　　*L* **30**　　　# 2512
Hajduczenia, Marek　　　　　　　Bright House Network

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

Emoty lines around Table 103-2. Also table is missing "continued" in title on second page.

SuggestedRemedy

Per comment.

Proposed Response　　　*Response Status*　**O**

Cl **103**　　*SC* **103.3.6.3**　　　　*P* **257**　　　*L* **3**　　　# 2513
Hajduczenia, Marek　　　　　　　Bright House Network

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

Extra blank lines around Table 103-3 and after item g) under the said table.

SuggestedRemedy

Remove empty spaces.

Proposed Response　　　*Response Status*　**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected　　　RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **103**
SC **103.3.6.3**

Page 28 of 41
10/21/2014 1:06:12 PM

Cl **103**   *SC* **103.3.6.3**   *P* **258**   *L* **1**   # 2528
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status* **D**
  "E" ?

SuggestedRemedy
  Remove if not needed or insert missing text if something was intended to be here.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.3.6.4**   *P* **258**   *L* **48**   # 2518
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status* **D**
  "Flags. this is an 8 bit flag register" - "this" should be capitalized?

SuggestedRemedy
  Why there are so many differences from Clause 77 in 802.3-2012? What base document
  was used to generate this Clause?

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.4**   *P* **261**   *L* **38**   # 2534
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status* **D**
  Subclause 103.4 is not needed in EPoC - there are no dual rate systems.

SuggestedRemedy
  Remove subclause 103.4 and associated editorial note in lines 34-35.

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.4**   *P* **261**   *L* **38**   # 2855
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status* **D**
  No reason for this section has been made known to the TF.

SuggestedRemedy
  Remove section 103.4 and editors note.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1**   *P* **28**   *L* **0**   # 2418
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status* **D**
  Seems that somebody did not change the template correctly: "IEEE P802.3xx Task Force
  name Task Force"

SuggestedRemedy
  Please update the master template for pages in the draft. There are multiple instanced of
  this problem.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1**   *P* **28**   *L* **19**   # 2417
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status* **D**
  There are two tables 45-3 in the draft. The existing editorial instructions are confusing.
  Each part of the table should have its own editorial instruction to clearly indicate which
  rows are replaced and jave clearly marked rows being inserted or modified.

SuggestedRemedy

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.107**   *P* **33**   *L* **52**   # 2420
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status* **D**
  "CRC40 Errored frames are passed to the MAC layer as is" - this does not sound very
  correct

SuggestedRemedy
  Change teh wording to "CRC40 Errored frames are passed to the MAC
  layer without error indication"
  Also, it would be nice to point a reader to what these CRC40 is and what CRC40 Errored
  frames" are
  Description in 45.2.1.107.1 is also in need of a reference to where the purpose of the said
  error indication mechanism is discussed. Right now it is handing off undefined.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 29 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.107**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45** *SC* **45.2.1.107**   *P* **34** *L* **8**   # 2423
Hajduczenia, Marek   Bright House Network

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

"coaxial cable distribution network (default)" - what does it mean that the given value is "default" ?

SuggestedRemedy

Explain what it means that the value is default. It seems to me that the register shoudl always reflect the actual state of the PHY discovery process, and there is no condition under which it would in an undefined state, indicating the need for a default value. Same for register 1.1900.0. In 45.2.1.107.3, you create default value without any need - note that in EPON we have the same requirement for pHY to be operational, yet we donot define default values for PHY enable registers. I am not sure why we need it at all in FDD mode. It was needed in TDD long time ago for some reason. Now it seems not needed.

Proposed Response   *Response Status* **O**

Cl **45** *SC* **45.2.1.107.1**   *P* **34** *L* **23** # 2421
Hajduczenia, Marek   Bright House Network

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

"every 8th 64B/66B block, e.g. 1st, 9th, 17th, 25th, " - current numbers indicate every 9th block:
block 1: marked
block 2
block 3
block 4
block 5
block 6
block 7
block 8
block 9: marked
There is 8 blocks of distance between them, hence it is every 9th block you're marking.

SuggestedRemedy

Fix it by indicating it is either every 8th block, or correct numbers in the example

Proposed Response   *Response Status* **O**

Cl **45** *SC* **45.2.1.107.2**   *P* **34** *L* **29** # 2422
Hajduczenia, Marek   Bright House Network

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

font is messed up in "102.4) on the coaxial cable distribution network. When read as a zero, bit 1.1900.1 indicates that the PHY has not completed PHY Discovery on the coaxial cable distribution network." - words "coaxial cable distribution network" are inserted in smaller font than the rest of the text

SuggestedRemedy

Fix font size / type

Proposed Response   *Response Status* **O**

Cl **45** *SC* **45.2.1.108**   *P* **35** *L* **20** # 2425
Hajduczenia, Marek   Bright House Network

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

Unnecessary (and quite meaningless) information in table: "samples refer to OFDM clock (204.8 MHz)"

SuggestedRemedy

Remove all 4 instances of this term from tables in Clause 45. You already explain what a sample is in definition of individual bits, which is sufficient.

Proposed Response   *Response Status* **O**

Cl **45** *SC* **45.2.1.108.1**   *P* **35** *L* **34** # 2424
Hajduczenia, Marek   Bright House Network

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

Stop creating new terms when not needed: "binary encoded integer"

SuggestedRemedy

Remove ", as a binary encoded integer," - it adds to confusion and the interpretation is already explained more than clear in the following sentence. Same in 45.2.1.108.2 and in 45.2.1.110.2
Similarly in 45.2.1.112.1 you create the term "binary integer" without any need. Remove all 4 instances of "as a binary integer" from the text, leaving just the orange of values intended.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line   *Cl* **45**   Page 30 of 41
SC **45.2.1.108.1**   10/21/2014 1:06:12 PM

Cl **45**   *SC* **45.2.1.108.3**   *P* **35**   *L* **47**   # 2426

Hajduczenia, Marek   Bright House Network

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

That is a new type of PMD: 10G-PASSS-XR

SuggestedRemedy

Change all "10G-PASSS-XR" to "10G-PASS-XR" (2 instances).

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.109**   *P* **36**   *L* **4**   # 2428

Hajduczenia, Marek   Bright House Network

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

Statement does not read right: "The assignment of bits in the DS OFDM channel frequency
control register 1 through 5 are shown in
Table 45–78c."

SuggestedRemedy

Change to "The assignment of bits in the DS OFDM channel frequency control register 1
through 5 >>is<< shown in
Table 45–78c."

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.109**   *P* **36**   *L* **6**   # 2427

Hajduczenia, Marek   Bright House Network

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

Extra lines 6-8

SuggestedRemedy

Remove

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.109.1**   *P* **36**   *L* **29**   # 2429

Hajduczenia, Marek   Bright House Network

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

The definition of this register might be clear to the author, but it is not clear to teh reader.
Do we assume 5 separate OFDM channels in downstream, or it is intended to be one large
block of frequencies.

SuggestedRemedy

Clarify the description for register 1.1902. Also, insert missing description for registers
1.1903/4/5/6, even though it might be repetetive, it has to be complete. A high level
drawing of what we are actually specifying here would be nice

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.110.1**   *P* **37**   *L* **45**   # 2368

Hajduczenia, Marek   Bright House Network

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

We typically start description from register number: The Probe duration parameter
(Register 1.1007.11)

SuggestedRemedy

Change to "Register 1.1907.11 (Probe duration) determines"
Note that also register number needs fixing. It is 1007 and should be 1907

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.110.2**   *P* **37**   *L* **53**   # 2369

Hajduczenia, Marek   Bright House Network

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

Format of the note is not correct (font and style)

SuggestedRemedy

Fix the style of note

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 31 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.110.2**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45** *SC* **45.2.1.110.3** *P* **38** *L* **4** # 2370
Hajduczenia, Marek Bright House Network

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

Incorrect PHY name: "10G-PASS_XR"

SuggestedRemedy

Change all "10G-PASS_XR" to "10GPASS-XR" (2 instances)
There are also multiple instances of "10G-PASS" which would be really "10GPASS"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.111.1** *P* **38** *L* **28** # 2371
Hajduczenia, Marek Bright House Network

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

"Subcarriers are numbered from 0 to 4095 withsubcarrier 0 at the lowest frequency" - we have 16 bits in total, indicating 65535 possible units. If a unit is 50Hz, we can reach 3,276,750Hz, which is consistent with value in line 29. However, the number of subcarriers is incorrect. It is 4095 and should be 65535

SuggestedRemedy

Change 4095 to 65535
Fill in the TBD value. Is there any reason for it NOT to be equal to zero? We are not concerned about running out of space here, are we?
Similar issue in 45.2.1.109.1, but there is some maximum value assigned there without any reason.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.112.1** *P* **39** *L* **7** # 2372
Hajduczenia, Marek Bright House Network

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

DOCSISism: "The Type 1 Repeat parameter cannot be zero, whereas a value of 1 would indicate that all subcarriers would be Type 1 Pilots unless otherwise specified via the US profile descriptor (see 45.2.7a.2)."
Same comment on 45.2.1.112.3

SuggestedRemedy

If the value of 0 is not allowed, then how about making it a reserved value?
The statement "all subcarriers would be Type 1 Pilots unless otherwise specified via the US profile descriptor " is just confusing, including double conditional statements is a way to misinterpret. Consider restating in simpler terms, to leave no doubts what is meant. As a side note, is this information really necessary in the description of this register?

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.113** *P* **39** *L* **39** # 2373
Hajduczenia, Marek Bright House Network

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

Unnecessary detail in the table "DS PHY Link starting subcarrier from 0 to 4095 in steps of 1 subcarrier."

SuggestedRemedy

Change to "DS PHY Link starting subcarrier" - teh rest should be included in 45.2.1.113.1

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.113.1** *P* **39** *L* **46** # 2374
Hajduczenia, Marek Bright House Network

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

"The DS PHY Link Start bits are used" should be "Registers 1.1911.11 through 1.1911.0"

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general						*Cl* **45**						Page 32 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn						*SC* **45.2.1.113.1**						10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.114**   *P* **39**   *L* **53**   # 2379

Hajduczenia, Marek   Bright House Network

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

"These registers permit the CNU to more rapidly acquire the PHY Link when its location is unknown." - it is not so registers in themselves, but the information contained in these registers.

SuggestedRemedy

Change to "These registers contain information permitting the CNU to locate the PHY Link more rapidly." - note that nothing prevents CNU from using this information when PHY Link location is known, or almost known.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.114**   *P* **40**   *L* **4**   # 2380

Hajduczenia, Marek   Bright House Network

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

There are several issues with the description of individual registers in Table 45–78h:

1.1912.14 provides a search control, in which case it should just have options to Start a search and Stop a search. "search complete" belongs to 1.1912.13. Definition in 45.2.1.114.1 and 45.2.1.114.2 need to be aligned accordingly.

1.1912.13 should be extended to 2 bits with the following encoding
1 1 reserved
1 0 search complete
0 1 search successful
0 0 search unsuccessul
Definition in 45.2.1.114.1 and 45.2.1.114.2 need to be aligned accordingly.

1.1912.12:0 contains unnecessary detail "From 1 to 5000 MHz in 1 MHz steps", which should be moved to 45.2.1.114.3 (already there, BTW)

1.19131914.7:0 contains unnecessary detail "From 1 to 256 MHz in 1 MHz steps", which should be moved to 45.2.1.114.4 (already there, BTW)

1.19131914.7:0 has likely incorrect number. Should be 1914.7:0 (likely)

1.19131914.7:0 has inconsistent name. Should be "DS PHY Link search step"

1.1912.13 has inconsistent name. Should be "DS PHY Link search status"

1.1914.12:0 has inconsistent name. Should be "DS PHY Link search count"

Apply the same set of changes to names in subclauses 45.2.1.114.xx

SuggestedRemedy

Changes per comment

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 33 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.114**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45** *SC* **45.2.1.114.3** *P* **40** *L* **37** *#* 2381

Hajduczenia, Marek   Bright House Network

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

Register bits 1.1912.12 through 1.1912.0 specify the starting frequency, in 1 MHz steps from 0 to 5000 MHz, at which to begin searching for a PHY Link.

Since there are 13 bits, we can go all the way to 8191 MHz. Is there any reason we need to go that far?

SuggestedRemedy

Either increase the resolution to 500kHz if needed, or decrease the size of register set to 12 bits.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.114.4** *P* **40** *L* **42** *#* 2382

Hajduczenia, Marek   Bright House Network

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

Register bits 1.1913.7 through 1.1913.0 specify the spectrum granularity, in 1 MHz steps from 1 to 256 MHz, between successive search attempts the PHY is to use when searching for a PHY Link.

Since we have 255 positions (2^8-1) available, we can search from 0 to 255. Otherwise, a different encoding is needed, i.e., all zeros represent 1, all 1s represent 256.

SuggestedRemedy

Either change the range to 0 to 255, or show the actual encoding

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.114.5** *P* **40** *L* **47** *#* 2383

Hajduczenia, Marek   Bright House Network

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

Register bits 1.1914.12 through 1.1914.0 specify the integer number of search steps through which to search for a PHY Link.

The word "integer" does not add anything here.

It is also not clear what "steps" are. Does it mean repetitions of the search process or something altogether else?

SuggestedRemedy

Remove "integer"
Clarify what "search steps" are or point to where they are defined.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.115** *P* **41** *L* **7** *#* 2384

Hajduczenia, Marek   Bright House Network

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

"from 0 to 4095 in steps of 1 subcarrier" - unnecessary detail in the table. It should be covered in 45.2.1.115.1

SuggestedRemedy

Add definition of resolution and range to 45.2.1.115.1

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.115.1** *P* **41** *L* **14** *#* 2385

Hajduczenia, Marek   Bright House Network

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

"The US PHY Link Start bits are used to set" - we usually list the registers

SuggestedRemedy

Change to "Registers 1.1915.11 through 1.1915.0 set"

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**
SC **45.2.1.115.1**

Page 34 of 41
10/21/2014 1:06:12 PM

Cl **45**   *SC* **45.2.1.116**   *P* **41**   *L* **20**   # 2361

Hajduczenia, Marek   Bright House Network

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

"The PHY Discovery process is used to bring up new CNUs on the EPoC Coax network. " - we do not use "coax network" anymore

SuggestedRemedy

Replace "coax network" with the proper term.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.116**   *P* **41**   *L* **29**   # 2856

Remein, Duane   Huawei Technologies

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

PHY Discovery Start should be a 32 bit register as 16 bits relative to timestamp only equates to about 320 us.

SuggestedRemedy

Change to 32 bits describing PHY Discovery Start lower (Reg 1916) & upper (Reg 1917) in 45.2.1.116.1 & 45.2.1.116.2 resp. Update subsequent register numbers.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.116.1**   *P* **41**   *L* **34**   # 2853

Remein, Duane   Huawei Technologies

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

We should provide a way to disable PHY Discovery windows at the CNU.

SuggestedRemedy

After correcting the para numbering (45.2.1.116.1 not 45.2.a.116.1) add the following to the end of the para:
"Setting the PHY Discovery start parameter to zero disables the PHY Discovery window."

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.116.1**   *P* **41**   *L* **38**   # 2880

Remein, Duane   Huawei Technologies

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

Not needed: EDITORS NOTE (to be removed prior to publication): we should be clear how PHY Disc start is interpreted at both the CLT (origination pt) and CNU (transmission starts at timestamp + offset)

SuggestedRemedy

remove note, with next draft this should be well covered.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.117**   *P* **42**   *L* **11**   # 2366

Hajduczenia, Marek   Bright House Network

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

"A new CNU may be assigned this value for CNU_ID if the CNU_ID assigned flag is false." It is very confusing why we would insert a value in 1.1917.14:0 and then disallow it to be assigned.

SuggestedRemedy

What is the purpose of this register 1.1917 altogether is unclear. Do we set the value for each newly discovered CNU and then write the value for each new CNU that is supposed to be discovered?
The purpose of regsters 45.2.1.117 and 45.2.1.118 need to be discussed in more detail. It seems that right now we make it more complex than necessary - the value for CNU could be assigned automatically without involvement of the management layer

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.117**   *P* **42**   *L* **8**   # 2365

Hajduczenia, Marek   Bright House Network

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

What is "allowed" CNU_ID? We do not define "disallowed" or any other values.

SuggestedRemedy

Remove the word "allowed" from 45.2.1.117

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**
SC **45.2.1.117**

Page 35 of 41
10/21/2014 1:06:12 PM

Cl **45**　　*SC* **45.2.1.117.1**　　　*P* **42**　　*L* **19**　　# 2364
Hajduczenia, Marek　　　　　　Bright House Network

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

"When the flag is Truethe associated CNU_ID has been assigned to a new CNU whereas when the flag is False the associated CNU_ID has not been assigned."

There are no True and False values defined, but only 1 and 0.

SuggestedRemedy

Update the listed sentences to use values of 0 and 1.

Proposed Response　　　*Response Status*　**O**

Cl **45**　　*SC* **45.2.1.120**　　　*P* **43**　　*L* **13**　　# 2367
Hajduczenia, Marek　　　　　　Bright House Network

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

Full stop is missing at the end of the line

SuggestedRemedy

Per comment.

Proposed Response　　　*Response Status*　**O**

Cl **45**　　*SC* **45.2.1.120.1**　　　*P* **43**　　*L* **28**　　# 2404
Hajduczenia, Marek　　　　　　Bright House Network

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

"The DS PHY Link frame counter bits reflect the current DS PHY Link frame count." - we usually list register numbers

SuggestedRemedy

Change to "Registers 1.1923.15 through 1.1923.0 represent the current DS PHY Link frame count."

Proposed Response　　　*Response Status*　**O**

Cl **45**　　*SC* **45.2.1.120.1**　　　*P* **43**　　*L* **29**　　# 2405
Hajduczenia, Marek　　　　　　Bright House Network

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

Reference to the whole Clause 102 is useless for a reader: "For additional information on this counter see Clause 102."

SuggestedRemedy

Either insert a more detailed reference to where in Clause 102 we use it, or remove this statement altogether

Proposed Response　　　*Response Status*　**O**

Cl **45**　　*SC* **45.2.1.121**　　　*P* **43**　　*L* **41**　　# 2406
Hajduczenia, Marek　　　　　　Bright House Network

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

"Transmit timing offset adjustment." - full stop not needed at the end of the description of 1.1924.15:0 and 1.1925.15:0

SuggestedRemedy

Remove "." at the end of both descriptions

Proposed Response　　　*Response Status*　**O**

Cl **45**　　*SC* **45.2.1.121.1**　　　*P* **43**　　*L* **49**　　# 2407
Hajduczenia, Marek　　　　　　Bright House Network

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

Missing space in "PHY timing offset(1.1924.15:0 & 1.1925.15:0)"

SuggestedRemedy

Insert the missing space

Proposed Response　　　*Response Status*　**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**
SC **45.2.1.121.1**

Page 36 of 41
10/21/2014 1:06:12 PM

Cl **45**   *SC* **45.2.1.121.1**   *P* **43**   *L* **51**   # 2408
Hajduczenia, Marek   Bright House Network

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

"A negative value causes the timing to be delayed, resulting in
later times of transmission at the CNU." -

SuggestedRemedy

What does it mean "later times of transmission"

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.122**   *P* **44**   *L* **10**   # 2409
Hajduczenia, Marek   Bright House Network

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

Resize the "Bit(s)" column so that "1.1926.15:8" fits into a single line of text

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.122**   *P* **44**   *L* **12**   # 2410
Hajduczenia, Marek   Bright House Network

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

"Relative TX Power offset adjustment" - why is it relative and what is "adjustment"

SuggestedRemedy

Change to "TX Power offset"

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.122**   *P* **44**   *L* **22**   # 2859
Remein, Duane   Huawei Technologies

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

See related comment against 101.4.2.1.2 Pg 124, Ln 24
Need mdio registers for provisioned data rates CLT_DS_DataRate & CLT_US_DataRate

SuggestedRemedy

Create Cl 45 registers per remein_3bn_15_1114.pdf.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.122**   *P* **44**   *L* **46**   # 2873
Remein, Duane   Huawei Technologies

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

See cmt against 102.4.2 pg 192 ln 18
EDITORS NOTE (to be removed prior to publication): need to create a mdio register for
RangingOffset (signed number same size as PhyTimingOffset) which defaults to zero. This
is to allow the operator to set the distance to the coax cable distribution network in the
event there is an analogue optical link between the CLT and coax cable distribution
network.

SuggestedRemedy

Don't need sign bit. See remein_3bn_15_1114.pdf, remove Ed Note.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.122**   *P* **44**   *L* **46**   # 2863
Remein, Duane   Huawei Technologies

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

Need mdio register to reflect FecCodeWordCount, FecCodeWordFail, &
FecCodeWordSuccess (see 101.3.3.1.4 pg 117 ln 31).

SuggestedRemedy

Add per remein_3bn_15_1114.pdf
Also add to MDIO Mapping table (see comment against 101.3.3.1.4 pg 117 ln 31)

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 37 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.122**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**　　　*SC* **45.2.1.122**　　　　*P* **44**　　　*L* **5**　　　# 2857
Remein, Duane　　　　　　　　　Huawei Technologies

Comment Type　**T**　　　*Comment Status*　**D**
Table 45–78o—power offset bit definitions missing "PHY"

SuggestedRemedy
Change to:
Table 45–78o—PHY power offset bit definitions.

Proposed Response　　　*Response Status*　**O**

Cl **45**　　　*SC* **45.2.1.122.1**　　　*P* **44**　　　*L* **17**　　　# 2411
Hajduczenia, Marek　　　　　　　Bright House Network

Comment Type　**T**　　　*Comment Status*　**D**
Change "The PHY power offset, bits 7:0 of register 1.1926, is a" to "Registers 1.1926.7 through 1.1926.0 represent a"

SuggestedRemedy
Per comment

Proposed Response　　　*Response Status*　**O**

Cl **45**　　　*SC* **45.2.1.122.1**　　　*P* **44**　　　*L* **21**　　　# 2858
Remein, Duane　　　　　　　　　Huawei Technologies

Comment Type　**T**　　　*Comment Status*　**D**
Need mdio register to reflect FecCodeWordCount, FecCodeWordFail, & FecCodeWordSuccess (see 101.3.3.1.4 pg 117 ln 31).

SuggestedRemedy
Add to Cl 45 at end of PMA/PMD register section.

Proposed Response　　　*Response Status*　**O**

Cl **45**　　　*SC* **45.2.1.6**　　　　*P* **30**　　　*L* **45**　　　# 2419
Hajduczenia, Marek　　　　　　　Bright House Network

Comment Type　**E**　　　*Comment Status*　**D**
is there any reason why this editorial note is marked in yellow highlight?

SuggestedRemedy
Remove the highlight.

Proposed Response　　　*Response Status*　**O**

Cl **45**　　　*SC* **45.2.7a**　　　　*P* **44**　　　*L* **27**　　　# 2389
Hajduczenia, Marek　　　　　　　Bright House Network

Comment Type　**E**　　　*Comment Status*　**D**
"The assignment of in the OFDM registers section is shown in Table 45–191a"
Missing "." at the end of the line.
Unnecessary word "section" in the statement

SuggestedRemedy
Per comment

Proposed Response　　　*Response Status*　**O**

Cl **45**　　　*SC* **45.2.7a**　　　　*P* **44**　　　*L* **39**　　　# 2854
Remein, Duane　　　　　　　　　Huawei Technologies

Comment Type　**T**　　　*Comment Status*　**D**
Table 45-191a shows a register for Resource Block type control but this function has been superseded by Pilot Pattern registers.

SuggestedRemedy
Remove line from table.

Proposed Response　　　*Response Status*　**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**
SC **45.2.7a**

Page 38 of 41
10/21/2014 1:06:12 PM

Cl **45**   *SC* **45.2.7a.1**   *P* **44**   *L* **51**   # 2391
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
The text describing the register set is confusing.

SuggestedRemedy
Revise text to read: "The 10GPASS-XR DS profile descriptor registers describe modulation
parameters for each downstream OFDM subcarrier. Register 12.0 describes modulation
parameters for downstream OFDM subcarriers number 0 through 3. Register 12.1
describes modulation parameters for downstream OFDM subcarriers number 4 through 7,
etc. Finally, register 12.1023 describes modulation parameters for downstream OFDM
subcarriers number 4092 through 4095. The assignment of individual bits in register 12.0 is
shown in Table 45-191c. The remaining registers 12.1 through 12.1023 have the same bit
structure as that of register 12.0. "

Apply the same change to 45.2.7a.2

Proposed Response   *Response Status*   **O**

Cl **45**   *SC* **45.2.7a.1**   *P* **45**   *L* **17**   # 2393
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
"Modulation to be used for a subcarrier 0" could be improved for clarity

SuggestedRemedy
Change to "Modulation profile for subcarrier 0". Same change for 12.0.15:12, 12.0.11:8,
and 12.0.7:4 for downstream, and then 12.1024.15:12, 12.1024.11:8, 12.1024.7:4, and
12.1024.3:0

Proposed Response   *Response Status*   **O**

Cl **45**   *SC* **45.2.7a.1**   *P* **45**   *L* **33**   # 2390
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
"Reserved values interpreted as null on receive" - what does this mean? We usually ignore
reserved values on receive

SuggestedRemedy
Per comment

The same change to Table 45–191c

Proposed Response   *Response Status*   **O**

Cl **45**   *SC* **45.2.7a.1**   *P* **45**   *L* **5**   # 2392
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**
empty lines 5-7

SuggestedRemedy
remove empty lines of text
Same change on page 46, lines 18-20

Proposed Response   *Response Status*   **O**

Cl **45**   *SC* **45.2.7a.1.1**   *P* **45**   *L* **39**   # 2394
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
"Register bits 12.0.15 through 12.0.12 specify the modulation type of downstream
subcarrier 3 for the first DS OFDM channel. Bit enumeration for bits 15:12 is the same as
for bits 3:0 for DS Modulation Type SC0" contains a lot of information which is redundant.

Change the text to read

"Register bits 12.0.15 through 12.0.12 specify the modulation profile for the downstream
OFDM subcarrier number 3. See registers 12.0.3 through 12.0.0 for interpretation of
individual bits."

Apply the same change to 45.2.7a.1.2, 45.2.7a.1.3, and 45.2.7a.1.4.

SuggestedRemedy
The same change should be applied to 45.2.7a.2.1, 45.2.7a.2.2, 45.2.7a.2.3, and
45.2.7a.2.4, with the proper change from downstream to upstream.

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 39 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.7a.1.1**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45** *SC* **45.2.7a.2** *P* **46** *L* **16** # 2395
Hajduczenia, Marek Bright House Network

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

"EDITORS NOTE (to be removed prior to publication): we need a way to copy the active profile copy to the inactive profile. This would affect these registers."

it is not clear what the difference is between active and inactive profiles and why we would need to copy "profiles". It seems that we have enough registers to cover all downstream and upstream subcarriers.

SuggestedRemedy

Remove the note in 45.2.7a.2 and 45.2.7a.1

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.7a.3** *P* **48** *L* **2** # 2396
Hajduczenia, Marek Bright House Network

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

Wrong register number: "12.2048 through 12.10237" should be "12.2048 through 12.10239" - at least that is what Table 45–191a indicates

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.7a.3.1** *P* **48** *L* **32** # 2397
Hajduczenia, Marek Bright House Network

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

A few editorial issues:
a) font sizes are different within this subclause. Please aslign it
b) "Register bits 12.2048.15:0" should read "Registers 12.2048.15 through 12.2048.0"
c) no need to capitalize "Real"
Simialr changes in 45.2.7a.3.2

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.7a.3.1** *P* **48** *L* **36** # 2398
Hajduczenia, Marek Bright House Network

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

Definition of the number format should be improved. Remove the editorial note and replace "The number is a 16-bit signed fractional two's complement number where bit 15 is the sign bit, bit 14 is integer part and bits 13:0 are the fractional part." to read

"The number is a 16-bit signed fractional two's complement number with the following structure:
* bit 15 is the sign bit,
* bit 14 represents the integer part of the number (1 or 0),
* bits 13 through 0 represent the fraction part of the number."

SuggestedRemedy

The same change in 45.2.7a.3.2

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.a.116.1** *P* **41** *L* **33** # 2362
Hajduczenia, Marek Bright House Network

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

Wrong subclause number: 45.2.a.116.1 should be 45.2.116.1

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.a.116.1** *P* **41** *L* **38** # 2363
Hajduczenia, Marek Bright House Network

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

The editorial note makes more sense in the PCS / PHY link sections and not in registers. Register shoudl point to where it is actually described.

SuggestedRemedy

Insert reference to where the the timestamp details are defined. Move the editorial note to that location.

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **45**
SC **45.2.a.116.1**

Page 40 of 41
10/21/2014 1:06:12 PM

Cl **56**   *SC* **56.1.3**   *P* **55**   *L* **10**   # 2375

Hajduczenia, Marek   Bright House Network

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

Time to change {EPoC_Rate} and {EPoC_Reach} into something meaniful

SuggestedRemedy

Change "{EPoC_Rate}" to "up to 10 Gb/s"
Change "{EPoC_Reach}" to "TBD"

Proposed Response   *Response Status* **O**

Cl **56**   *SC* **56.1.5**   *P* **56**   *L* **40**   # 2376

Hajduczenia, Marek   Bright House Network

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

"In contrast to previous editions of IEEE Std 802.3, ..." it is just an odd statement, given
that it has been allowed in 802.3 since 2007 at least when 1G-EPON and EFM came out.

SuggestedRemedy

Change "In contrast to previous editions of IEEE Std 802.3, in certain circumstances" to "In
certain circumstances"

Proposed Response   *Response Status* **O**

Cl **67**   *SC* **67.6.1**   *P* **61**   *L* **10**   # 2377

Hajduczenia, Marek   Bright House Network

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

Note that there is anoustanding MR
(http://www.ieee802.org/3/maint/requests/maint_1255.pdf) adding changes to Clause 67
already and it is ready for ballot.

SuggestedRemedy

Once new revision process starts and merged base standard is available, alignment will be
needed

Proposed Response   *Response Status* **O**

Cl **76**   *SC* **76**   *P* **63**   *L* **1**   # 2378

Hajduczenia, Marek   Bright House Network

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

Title probably does not need "2014" in it ...

SuggestedRemedy

Remove "2014" from title of Clause 76

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **76**   Page 41 of 41
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **76**   10/21/2014 1:06:12 PM
SORT ORDER: Clause, Subclause, page, line