Cl **1**   *SC* **1.4.277a**   *P* **28**   *L* **47**   # i-1

Anslow, Peter   Ciena Corporation

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

The P802.3bq amendment is expected to be approved before 802.3bn. The P802.3bq draft is inserting a new definition for "MultiGBASE-T" which should be 1.4.277a . P802.3bq D3.0 has this as 1.4.277b, but a comment will be submitted to correct this.

SuggestedRemedy

Change the editing instruction to: "Insert the following definition after 1.4.277 "mixing segment" and before 1.4.277a (as inserted by IEEE Std 802.3bq-201x) as follows:" Change the definition to be 1.4.277aa

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.294b**   *P* **29**   *L* **5**   # i-2

Anslow, Peter   Ciena Corporation

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

"optical distribution network (ODN)" should be after 1.4 296 "Operations, Administration, and Maintenance (OAM)"

SuggestedRemedy

Renumber 1.4.294b to 1.4.296a and add appropriate editing instruction

Proposed Response   *Response Status* **O**

Cl **30**   *SC* **30.3.5.1.3**   *P* **32**   *L* **11**   # i-3

Anslow, Peter   Ciena Corporation

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

Text has been added to say "When this attribute has the enumeration "CLT", the interface acts as a CLT. When this attribute has the enumeration "CNU", the interface acts as a CNU." However, the APPROPRIATE SYNTAX section of 30.3.5.1.3 only has enumerations of "OLT" and "ONU"

SuggestedRemedy

Add enumerations of "CLT" and "CNU" to the APPROPRIATE SYNTAX section of 30.3.5.1.3

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.14aa**   *P* **38**   *L* **17**   # i-4

Anslow, Peter   Ciena Corporation

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

In "Insert 45.2.1.14aa and Table 45-17aa after 45.2.1.14a as inserted by IEEE Std 802.3by-201x as follows:", "after" should be "before".

SuggestedRemedy

Change "after" to "before".

Proposed Response   *Response Status* **O**

Cl **FM**   *SC* **FM**   *P* **1**   *L* **1**   # i-5

Hajduczenia, Marek   Bright House Network

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

Based on IEEE P802.3by entering sponsor ballot in November 2015, IEEE P802.3bq and IEEE P802.3bp entering sponsor ballot in December 2015, the published timeline for IEEE P802.3bq showing approval in June 2016, and the published timeline for IEEE P802.3bp showing approval in August 2016, it seems likely that that IEEE P802.3by will be the second amendment, IEEE P802.3bq will be the third amendment, and IEEE P802.3bn will be the fifth or sixth amendment to IEEE Std 802.3-2015.

SuggestedRemedy

Please change '(Amendment of IEEE Std 802.3(TM)-2015)' to read 'Amendment of IEEE Std 802.3(TM)-2015 as amended by IEEE Std 802.3bw(TM)-2015), IEEE Std 802.3by(TM)-201X, IEEE Std 802.3bq(TM)-201X, IEEE Std 802.3bp(TM)-201X" Keep the list updated as project status changes

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-5**   Page 1 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:26 PM
SORT ORDER: Comment ID

Cl **FM**   *SC* **FM**   *P* **13**   *L* **14**   # i-6

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**   *EZ AmendList*

Suggest that this text be updated based on: (a) the approval of IEEE Std 802.3bw-2015, the likelihood that IEEE P802.3by will be the second amendment, IEEE P802.3bq will be the third amendment, and IEEE P802.3bp will be the fourth amendment to IEEE Std 802.3-2015; (b) use of the (TM) symbol only on the first instance; and (c) alignment of IEEE P802.3bn description with other amendment descriptions

SuggestedRemedy

[1] The following text should be inserted prior to the existing text 'IEEE Std 802.3bn(TM)-201x':
IEEE Std 802.3bw-2015
Amendment 1--This amendment includes changes to IEEE Std 802.3-2015 and adds Clause 96. This amendment adds 100 Mb/s Physical Layer (PHY) specifications and management parameters for operation on a single balanced twisted-pair copper cable.
IEEE Std 802.3by-201x
Amendment 2--This amendment includes changes to IEEE Std 802.3-2015 and adds Clause 105 through Clause 112, Annex 109A, Annex 109B, Annex 110A, Annex 110B, and Annex 110C. This amendment adds MAC parameters, Physical Layers, and management parameters for the transfer of IEEE 802.3 format frames at 25 Gb/s.
IEEE Std 802.3bq-201x
Amendment 3--This amendment includes changes to IEEE Std 802.3-2015 and adds Clause 113 and Annex 113A. This amendment adds new Physical Layers for 25 Gb/s and 40 Gb/s operation over balanced twisted-pair structured cabling systems.
IEEE Std 802.3bp-201x
Amendment 4--This amendment includes changes to IEEE Std 802.3-2015 and adds Clause 97 and 98. This amendment adds point-to-point 1 Gb/s Physical Layer (PHY) specifications and management parameters for operation on a single balanced twisted-pair copper cable in automotive and other applications not utilizing the structured wiring plant.

[2] Insert "Amendment 5--" before the current descriptive text for IEEE Std 802.3bn(TM)-201x

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.331**   *P* **29**   *L* **16**   # i-7

Hajduczenia, Marek   Bright House Network

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

Strike statement: "Frames transit the network between the central station and the end stations and do not transit directly from end station to end station." - we do not restrict ONU/CNU to ONU/CNU communication, if one desired to deploy links between them - these are outside of the scope of our definitions.

SuggestedRemedy

per comment

Proposed Response   *Response Status* **O**

Cl **30**   *SC* **30**   *P* **31**   *L* **1**   # i-8

Hajduczenia, Marek   Bright House Network

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

Suggest the editing instructions be updated listing the expected approval order for any objects modifying selected attributes.
This helps the reader understand that this object is being modified by multiple projects, and also help staff editorial combine individual amendments into a single base document down the road
This applies to aPhyType, aPhyTypeList, aMAUType

SuggestedRemedy

For example, aPhyType is being modified by all 5 amendments (this one and 4 previous ones):
Change "Insert in alphanumeric order a single line for "10GPASS-XR" type into the APPROPRIATE SYNTAX
list of 30.3.2.1.2 aPhyType as shown below." to Insert in alphanumeric order a single line for "10GPASS-XR" type into the APPROPRIATE SYNTAX
list of 30.3.2.1.2 aPhyType (as modified by IEEE Std 802.3bw-2015, IEEE Std 802.3by-201X, IEEE Std 802.3bq-201X, and IEEE Std 802.3bp-201X) as shown below.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-8**   Page 2 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:26 PM
SORT ORDER: Comment ID

Cl **45** *SC* **45.2** *P* **33** *L* **6** # i-9
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **D** *EZ*
No need to show unchanged rows.

SuggestedRemedy
Change editorial instructions to read: "Change reserved row 12 through 28 as shown below (unchanged rows are not shown)"
Strike rows 0 through 11, 29 through 31

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.131** *P* **39** *L* **1** # i-10
Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **D** *Cl45 renum*
Registers 45.2.1.133 through 45.2.1.137 are already allocated by P802.3bw, which will likely be published before .3bn

SuggestedRemedy
move registers 45.2.1.131 - 165 to 45.2.1.138 - 172 and renumber accordingly
Renumber also Tables to make sure there is no conflict with projects in Sponsor Ballot or approved.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.144** *P* **49** *L* **32** # i-11
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D** *EZ*
You might likely want to list full register number: "Registers 1.1923 and 1922 form an offset"

SuggestedRemedy
Change to "Registers 1.1923 and 1.1922 form an offset"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.147** *P* **51** *L* **1** # i-12
Hajduczenia, Marek Bright House Network

Comment Type **TR** *Comment Status* **D**
It is not clear why DS PMA/PMD data rate is chopped up in such an unreadable format:
bits 15:0 first, followed by bits 2:0, followed by bits 31:16, followed by Reserved space and followed by bits 36:32
The same applies to Table 45-98r

SuggestedRemedy
Suggest the following order:
1.1927.15:0 -> bits 36:21 (call it fixed, upper)
1.1926:15:0 -> bits 20:5 (call it fixed, middle)
1.1925:15:14 -> bits 4:3 (call it fixed, bottom)
1.1925:13:11 -> bits 2:0 (call it fraction)
1.1925:10:0 -> Reserved
Similar changes for Table 45-98r

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.149** *P* **52** *L* **1** # i-13
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **D**
Table footnote got separated from table

SuggestedRemedy
Please make sure there are no runaway footnotes to tables

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.7a.4** *P* **64** *L* **18** # i-14
Hajduczenia, Marek Bright House Network

Comment Type **TR** *Comment Status* **D**
Table 45-98q and Table 45-98r specify order of mapping of fixed and fractional elements of a floating point number. Why is the same not done in Table 45-211e and other table defining pre-equalizer coefficients? Is the mapping intended to start with fixed or fractional part?

SuggestedRemedy
Consider adding details from Table 45-98q/r to make sure that it is clear where fractional and fixed elements of the floating point numbers would be located

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-14** Page 3 of 68
2/22/2016 1:48:27 PM

Cl **56**   *SC* **56.1**   *P* **69**   *L* **31**   # **i-15**
Hajduczenia, Marek   Bright House Network

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

The list of Clauses for 10G-EPON lists PHY and PMD only, while EPoC also lists MPCP for some reason

SuggestedRemedy

Change "Clause 101, Clause 102, and Clause 103" to "Clause 101 and Clause 102"

Proposed Response   *Response Status* **O**

Cl **56**   *SC* **56.1.3**   *P* **72**   *L* **10**   # **i-16**
Hajduczenia, Marek   Bright House Network

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

Some spurious "\" in Rate column

SuggestedRemedy

Change "(tx)\h" to "(tx)h" with proper footnote reference format

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.1.4**   *P* **83**   *L* **32**   # **i-17**
Hajduczenia, Marek   Bright House Network

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

Different ways to specify ranges: "RxMER_SC(4) through RxMER_SC(4095)" but "3050, 3052 ... 11238"

SuggestedRemedy

Use a consistent way, for example: "3050 through 11238"
Apply to all tables in Clause 100, 101, 102 - there are multiple instances

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.1.2**   *P* **84**   *L* **17**   # **i-18**
Hajduczenia, Marek   Bright House Network

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

"an I / Q value" - it would make more sense to call it "an I/Q value" (no spaces) to avoid line breaking across "I / Q"
Make sure that line breaking on "/" is disabled

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.2.1.2**   *P* **84**   *L* **20**   # **i-19**
Hajduczenia, Marek   Bright House Network

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

Text does not match primitive: "PMD_UNITDATA.request(I_value, Q_value, ChNum)" versus "The data conveyed by PMD_UNITDATA.request is a continuous stream of I / Q value pairs." - it is not just I/Q pairs that are being transmitted, but also channel number

SuggestedRemedy

Change "The data conveyed by PMD_UNITDATA.request is a continuous stream of I/Q value pairs and target OFDM channel."
Change "The Clause 101 PMA continuously sends the stream of I / Q value pairs to the Clause 100 PMD for transmission on the medium, at the nominal rate of 204.8 million samples per second (Msps)." to "The Clause 101 PMA continuously sends the stream of I/Q value pairs and OFDM channel number to the Clause 100 PMD for transmission on the medium, at the nominal rate of 204.8 million samples per second (Msps)."
See Figure 101-1 for reference on what is sent to PMD via PMD_UNITDATA primitive
Similar changes needed to 100.2.1.3, where PMD_UNITDATA.indication is defined only in terms of I/Q pairs, omitting OFDM channel information altogether

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-19**   Page 4 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.2.3**   *P* **85**   *L* **13**   # i-20
Hajduczenia, Marek   Bright House Network

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

Text "The PMD Receive function conveys the bits received from the MDI to the PMD service interface using the message PMD_UNITDATA.indication(I_value, Q_value), creating appropriately formatted stream of I / Q value pairs." does not match Figure 101-3, where PMD_UNITDATA.indication(I_value, Q_value, ChNum) is shown

SuggestedRemedy

Change text to read "The PMD Receive function conveys the bits received from the MDI to the PMD service interface using the message PMD_UNITDATA.indication(I_value, Q_value, ChNum), creating appropriately formatted stream of I/Q value pairs and OFDM channel information."

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.4**   *P* **85**   *L* **20**   # i-21
Hajduczenia, Marek   Bright House Network

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

Unclear what "this" is in the statement: "this is not defined for the CLT"

SuggestedRemedy

Change to "PMD_SIGNAL.request(Tx_Enable) message is not defined for the CLT"

Proposed Response   *Response Status*   **O**

Cl **100A**   *SC* **100A.1**   *P* **349**   *L* **45**   # i-22
Hajduczenia, Marek   Bright House Network

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

Figure 100A-1 is intended (I believe) to be an example, rather than a normative representation of EPoC network topology

SuggestedRemedy

Change "Figure 100A-1--EPoC network topology" to "Figure 100A-1--EPoC network topology (example)"

Proposed Response   *Response Status*   **O**

Cl **100A**   *SC* **100A.1**   *P* **349**   *L* **48**   # i-23
Hajduczenia, Marek   Bright House Network

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

Reference in lines 49-53 should be converted into entries in Annex A, and then referenced via [XX] references - these are non-normative reference

SuggestedRemedy

Per comment
Change "NOTE - Additional information on cable coaxial network topology can be found in:" to "NOTE - Additional information on cable coaxial network topology can be found in [A] and [B]." update the proper letters, when references are inserted.
Also, apply proper FM style to NOTE - it is in T,Text right now

Proposed Response   *Response Status*   **O**

Cl **100A**   *SC* **100A.2**   *P* **350**   *L* **11**   # i-24
Hajduczenia, Marek   Bright House Network

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

PSD is used in 8 locations, but never really defined / expanded

SuggestedRemedy

Please provide expansion on first use and consider adding to list of acronyms in Clause 1

Proposed Response   *Response Status*   **O**

Cl **100A**   *SC* **100A.2**   *P* **350**   *L* **7**   # i-25
Hajduczenia, Marek   Bright House Network

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

Is "HFC Node" the same as "Node"?

SuggestedRemedy

Seems that "Node" is more common. Change all "HFC Node" to "Node"
Also, consider adding definition of what a "Node" is, since it is used under assumption that it is a commonly known definition, which is not the case in 802.3

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-25**   Page 5 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100A**   *SC* **100A.2**   *P* **350**   *L* **17**   # i-26
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**
   Table 100A-1 contains multiple acronyms that are not defined anywhere - when they are used in 1/2 locations, just expand them and not define them at all

SuggestedRemedy
   Examples: SCN, CTB, CSO, SCN

Proposed Response   *Response Status*   **O**

Cl **100A**   *SC* **100A.2**   *P* **352**   *L* **4**   # i-27
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status*   **D**
   All notes under the table are NOT in the right format.

SuggestedRemedy
   Apply proper FM style - right now these are simple T,Text style text.
   Also, is the intent to use informative or normative notes here? There is a difference and it seems that you're after footnotes, and not notes to table. If that is the case, use footnotes, and not notes.
   The same observation applies to Table 100A-2

Proposed Response   *Response Status*   **O**

Cl **100A**   *SC* **100A.4.3**   *P* **356**   *L* **6**   # i-28
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **D**
   I am very confused by TOPO PICS entry - what does it even mean that the baseline channel model shall be based on Figure 100A-1? PERF1 and PERF2 make some sense, in that these are requirements for channel to meet in order to support baseline EPoC operation.

SuggestedRemedy
   Strike 100A.4.3 + remove associated shall requirement

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.2.1**   *P* **87**   *L* **10**   # i-29
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
   "This establishes nominal data rate for CLT PMA_UNITDATA.request() service interface." - unclear what "This" means in this sentence. Is this reference to equation 100-1 or DS-DataRate? Please clarify
   Also, "CLT PMA_UNITDATA.request()" should be "CLT PMA_UNITDATA.request", since we do not list all primitive parameters. Same on page 88, line 1

SuggestedRemedy
   Per comment

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.2.2**   *P* **87**   *L* **30**   # i-30
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
   Odd unit: "(upstream) (us))"

SuggestedRemedy
   Change to "(us)"
   It is not clear what the implication of "(upstream)" is here

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.2.3**   *P* **88**   *L* **19**   # i-31
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
   There is no reason to keep DS_ChCnt variable in bit-format - it should be specified as unsigned integer and how it is mapped into register(s) is quite straightforward, considering the value range: 1- 5
   Similar comment on DS_PowerCh(n) in 100.3.4.2.1

SuggestedRemedy
   Per comment

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-31**   Page 6 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.3**   *P* **88**   *L* **37**   # i-32
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
This kind of information should be included in the subclause called "Labelling"

SuggestedRemedy
Move this to 100.5.4 and convert into a non-requirement. Unless you provide specific normative way of labelling wavelength ranges, it is not testable as defined right now. Remove associated PICS

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.4.1**   *P* **89**   *L* **29**   # i-33
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
I do not see any value in Equation 100-3 - it is a simple division, which can be described in simple words

SuggestedRemedy
Strike Eq (100-3)
Change "The number of equivalent 6 MHz channels, Neq, is constant and is derived from a single OFDM channel size of 192 MHz" to "The number of equivalent 6 MHz channels, Neq, is constant and calculated for a single OFDM channel size of 192 MHz as follows: 192/6 = 32."

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.4.1**   *P* **89**   *L* **43**   # i-34
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
Text does not match the equation 100-4. "Occupied spectrum (Occupiedspectrum) ... is the sum of ... "

SuggestedRemedy
Change to "Occupied spectrum (Occupiedspectrum) as shown in Equation (100-4) is the product of ... "

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.4.1**   *P* **90**   *L* **13**   # i-35
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
"The modulated spectrum at the MDI ("RF port") is" - MDI is defined already before

SuggestedRemedy
Strike "("RF port")" here and going forward - there is no need to repeat the statement that MDI is the said RF port

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.4.2**   *P* **92**   *L* **16**   # i-36
Hajduczenia, Marek   Bright House Network

Comment Type **ER**   *Comment Status* **D**
"[ISO/IEC-61169-24] or [SCTE 02]" are not in the list of references right now ...

SuggestedRemedy
Add these as normative references to Clause 1

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.4.2**   *P* **92**   *L* **21**   # i-37
Hajduczenia, Marek   Bright House Network

Comment Type **ER**   *Comment Status* **D**
Seems like definition of MER should be moved to a normative part of the text, where other definitions are also detailed: 100.3.4.1 OFDM channel power definitions

SuggestedRemedy
Per comment - it is used in at least 286 locations in the draft today, with no other definition.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-37**   Page 7 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100** *SC* **100.3.4.4** *P* **93** *L* **14** # i-38

Hajduczenia, Marek Bright House Network

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

minimum function is typically surrounded by () and not by []

SuggestedRemedy

Change "minimum[..]" to "minimum(...)"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.4.4** *P* **93** *L* **14** # i-39

Hajduczenia, Marek Bright House Network

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

Equations splicing two curves are typically written with a curly bracket format: see P802.3bp D3.1, Eq 97-17 as an example. Then whole "if" conditioning becomes unnecessary

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.4.4** *P* **93** *L* **34** # i-40

Hajduczenia, Marek Bright House Network

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

"NOTE-- With N* = bottom term in Equation (100-6)" - this is unnecessary, you already provide condition, i.e., Neqport ' >= Neqport

SuggestedRemedy

Strike "NOTE-- With N* = bottom term in Equation (100-6)"
Strike "NOTE-- With N* = top term in Equation (100-6)"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.4.4** *P* **94** *L* **1** # i-41

Hajduczenia, Marek Bright House Network

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

Notes separated from table

SuggestedRemedy

Please make sure that footnotes are not separated from the table

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.4.4** *P* **94** *L* **7** # i-42

Hajduczenia, Marek Bright House Network

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

Notation for ceiling not consistent with 100.1.1, where specific symbols are introduced

SuggestedRemedy

Please align the use of "ceiling" function in footnote d) with symbols defined in 100.1.1
The same applies to floor function.
Multiple locations in the draft

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.4.4** *P* **94** *L* **12** # i-43

Hajduczenia, Marek Bright House Network

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

"The CLT shall comply with all requirements operating with all Neqport channels on the RF port and with all
requirements for the device operating with Neqport' active channels on the RF port for all values of Neqport'
less than Neqport." - unclear what these requirements are, so this requirement is not testable as specified right now

SuggestedRemedy

Please add clear reference where the said requirements are listed

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-43**
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2/22/2016 1:48:27 PM

Cl **100**   *SC* **100.3.4.5**   *P* **94**   *L* **25**   # i-44
Hajduczenia, Marek   Bright House Network

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

"The CLT modulator shall satisfy ... " - it is hardly a requirement for the modulator itself that we write. It is the CLT PMD that we're writing requirements against.

SuggestedRemedy

Change all requirements towards the "CLT modulator" to "10GBASE-XR-D PMD", which is what we need. This is as specific as we need to get here IMO
Multiple locations are affected.

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.4.5**   *P* **95**   *L* **10**   # i-45
Hajduczenia, Marek   Bright House Network

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

No need to break out Neqi definition into a separate line and merge with text from line 12

SuggestedRemedy

Change text 8-10: "each contiguous sub-block is denoted as <i>Neqi</i>, for <i>i</i> = 1 to <i>K</i>, where <i>K</i> is the number of contiguous blocks. Therefore,"

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.4.5**   *P* **96**   *L* **20**   # i-46
Hajduczenia, Marek   Bright House Network

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

Text in Requirement column for some of rows is very, very small. Suggest to either break the text down into multiple lines per entry, or alternatively create external equation, and just reference in the table. The way it is right now it is only readable when zoomed in to 400%

SuggestedRemedy

Per comment - this applies to items 1, 2, 6. Other items could be also more readable as external equations

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.4.6**   *P* **97**   *L* **25**   # i-47
Hajduczenia, Marek   Bright House Network

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

"The CLT shall provide for ... " - CLT as a system? This is the PMD clause

SuggestedRemedy

Consider rewriting it to a CLT PMD requirement, e.g., "The 10GPASS-XR-D PMD shall support ..."
Update PICS. There are multiple entries in Clause 100 where similar generic requirement is stated
There are also similar generic statements for a CNU, without indicating which layer is responsible for the function

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.1**   *P* **97**   *L* **37**   # i-48
Hajduczenia, Marek   Bright House Network

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

RB Superframe or RB superframe?

SuggestedRemedy

Pick one, use consistently

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.2**   *P* **98**   *L* **38**   # i-49
Hajduczenia, Marek   Bright House Network

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

Is the ending dot in Eq 100-9 associated with any specific meaning?

SuggestedRemedy

Remove the dot in Eq 100-9

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required   ER/editorial required   GR/general required   T/technical   E/editorial   G/general   *Comment ID*   **i-49**   Page 9 of 68
COMMENT STATUS: D/dispatched   A/accepted   R/rejected   RESPONSE STATUS: O/open   W/written   C/closed   U/unsatisfied   Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100** *SC* **100.3.5.2** *P* **98** *L* **40** # i-50

Hajduczenia, Marek Bright House Network

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

Units in the wrong location: "53.2 dBmV+ (PMax - 65)"

SuggestedRemedy

Change to "53.2 + (PMax - 65) dBmV"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.5.3** *P* **98** *L* **55** # i-51

Hajduczenia, Marek Bright House Network

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

Unnecessary equation

SuggestedRemedy

Change "power P1.6t, as follows:
P1.6r = reported power level (dBmV) of CNU for the channel."
to
power P1.6t, i.e., the reported power level (dBmV) of CNU for the channel."

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.5.4.1** *P* **100** *L* **6** # i-52

Hajduczenia, Marek Bright House Network

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

Under-grant Hold Subcarriers - very long parameter name :) Please consider changing it into something shorter, e.g., SubCount (which is consistent with the definition in the brackets)

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.5.4.1** *P* **100** *L* **16** # i-53

Hajduczenia, Marek Bright House Network

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

Another unnecessary equation, which is not referenced

SuggestedRemedy

Change "plus an amount X dB where:
X dB = 17 dBmV - Pt"
to
"plus 17 - Pt dBmV"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.5.4.2** *P* **102** *L* **10** # i-54

Hajduczenia, Marek Bright House Network

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

In Eq 100-14, the Round function for some reason is written in non-italics. Is this intentional?

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.5.4.2** *P* **102** *L* **17** # i-55

Hajduczenia, Marek Bright House Network

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

It is odd to see units of MHz stuck in the middle of the equation, especially when it is not clear what the end unit should be in this case

SuggestedRemedy

Consider moving MHz out of the equation and putting "(MHz)" outside of equation, to indicate what units are used. There are several equations in Clause 100 with the same problems.

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-55**

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2/22/2016 1:48:27 PM

Cl **100**   *SC* **100.3.5.4.2**   *P* **103**   *L* **1**   # i-56

Hajduczenia, Marek   Bright House Network

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

Odd dot in the top left hand corner

SuggestedRemedy

Please remove. There are multiple pages in the draft where such standalone dots are visible.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.2**   *P* **103**   *L* **6**   # i-57

Hajduczenia, Marek   Bright House Network

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

In Table 100-8, some numbers and text is added in [], which is neither explained nor justified

SuggestedRemedy

Either explain what this designation means, or removed altogether.
The same applies to Table 100-9

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.3**   *P* **103**   *L* **46**   # i-58

Hajduczenia, Marek   Bright House Network

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

This is not intended to be lecture notes: "Firstly, it should be noted ..."

SuggestedRemedy

Change to "Note that ..." if such introduced is needed at all. Later in the same para, remove "Secondly," which is also not necessary

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.3**   *P* **103**   *L* **48**   # i-59

Hajduczenia, Marek   Bright House Network

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

"provides specification "dBc" only" - what does it mean that Table provides such specification? The term "dBc" is not explained, and it is not cleat what "specification dBc really is"

SuggestedRemedy

Please clarify - no clue what it is supposed to be

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.3**   *P* **104**   *L* **10**   # i-60

Hajduczenia, Marek   Bright House Network

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

Rather odd equation with "The" in the middle: "Modulated Subcarriers - The Under-grant Hold Bandwidth"

SuggestedRemedy

Change "for a grant equal to:
Modulated Subcarriers - The Under-grant Hold Bandwidth."
to
"for a grant equal to <i>Modulated Subcarriers</i> - <i>Under-grant Hold Bandwidth</i>."

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.3**   *P* **104**   *L* **31**   # i-61

Hajduczenia, Marek   Bright House Network

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

Round function has been used before, but explained only here.

SuggestedRemedy

Suggest to move the definition to 100.1.1 (terminology and conventions) if it is used pervasively (so it seems now) in this clause

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-61**   Page 11 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.5.4.4**   *P* **105**   *L* **37**   # i-62

Hajduczenia, Marek   Bright House Network

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

Requirement broken into two sentences: "The CNU's voltage step shall be dissipated no faster than 4 us of constant slewing. This requirement applies
when the CNU is transmitting at +55 dBmV or more."

SuggestedRemedy

Change to "The CNU's voltage step shall be dissipated no faster than 4 us of constant slewing when the CNU is transmitting at +55 dBmV or more."
Update PICS

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.4.4**   *P* **105**   *L* **40**   # i-63

Hajduczenia, Marek   Bright House Network

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

Requirement broken into two sentences: "At backed-off transmit levels, the CNU's maximum change in voltage shall decrease by a factor of 2 for each
6 dB decrease of power level, from +55 dBmV down to a maximum change of 3.5 mV at 31 dBmV and
below. The transient response requirement does not apply to CNU power-on and power-off transients."

SuggestedRemedy

Change to "At backed-off transmit levels, the CNU's maximum change in voltage shall decrease by a factor of 2 for each 6 dB decrease of power level, from +55 dBmV down to a maximum change of 3.5 mV at 31 dBmV and below, excluding the CNU power-on and power-off transients."

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.5**   *P* **105**   *L* **52**   # i-64

Hajduczenia, Marek   Bright House Network

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

Inter-Carrier Interference (ICI) - used only once, no need to define

SuggestedRemedy

Remove "(ICI)"

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.5**   *P* **105**   *L* **54**   # i-65

Hajduczenia, Marek   Bright House Network

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

Requirements can be hardly measured ... "MER requirements are measured with a calibrated test instrument ... "

SuggestedRemedy

Change to read: "Compliance with MER requirements is verified with the use of a calibrated test instrument ... "
It would be also very valuable to include any reference to a normative MER test procedure, or where the said device is defined / described in more detail - SCTE?

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.5.1**   *P* **106**   *L* **27**   # i-66

Hajduczenia, Marek   Bright House Network

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

Seems like the top of Eq 100-19 is cut off

SuggestedRemedy

Please move the top edge of equation up, and show the missing elements of (I assume) round brackets

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.5.5.1**   *P* **106**   *L* **41**   # i-67

Hajduczenia, Marek   Bright House Network

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

The summation symbol in Eq 100-20 used "j" index, which is NOT used then in RBMER

SuggestedRemedy

Please fix equation and show where "j" index is used

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-67**   Page 12 of 68
2/22/2016 1:48:27 PM

Cl **100**   *SC* **100.3.5.5.2**   *P* **107**   *L* **10**   # i-68

Hajduczenia, Marek   Bright House Network

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

"The following flat channel measurements with no tilt are made ..." - but there are NO following measurements.

SuggestedRemedy

What is the purpose of this statement? Is this a reference to Table 100-10? Either remove the word "following" (which is confusing right now in the context) or provide the said "following flat channel measurements"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.6**   *P* **107**   *L* **29**   # i-69

Hajduczenia, Marek   Bright House Network

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

"characteristics delineated in Table 100-11" - this is a new word :)

SuggestedRemedy

Change to "characteristics defined in Table 100-11"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.6**   *P* **107**   *L* **35**   # i-70

Hajduczenia, Marek   Bright House Network

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

"7.4 to at least 204" - to avoid interpretation issues, please indicate if 204 is included or not

SuggestedRemedy

Change to "7.4 to >=204"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.6**   *P* **107**   *L* **47**   # i-71

Hajduczenia, Marek   Bright House Network

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

Double requirements - must be really important: "CNU shall be capable of transmitting a total average output power."

SuggestedRemedy

Either move it out of the normative (required) table, or convert into a normative footnote to table

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.7**   *P* **108**   *L* **18**   # i-72

Hajduczenia, Marek   Bright House Network

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

Seems like two sentences were joined together? "In EPoC, the upstream CNU PMD RF power amplifier (PA) may be turned off between bursts as shown in Figure 100-3 PMD_SIGNAL.request(ON) is asserted when the first bit of the burst is conveyed from the PCS to the PMA via PMA_UNITDATA.request() (see 101.4.2.1)."

SuggestedRemedy

Change to: "In EPoC, the upstream CNU PMD RF power amplifier (PA) may be turned off between bursts as shown in Figure 100-3. PMD_SIGNAL.request(ON) is asserted when the first bit of the burst is conveyed from the PCS to the PMA via PMA_UNITDATA.request() (see 101.4.2.1)."

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.7**   *P* **108**   *L* **21**   # i-73

Hajduczenia, Marek   Bright House Network

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

TPMA is mentioned, but not really defined. TPMA = The delay time through the EPoC PMA???

SuggestedRemedy

Please define the acronym, it is used 6 times in the document altogether

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-73**   Page 13 of 68

COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM

SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.6.1**   *P* **109**   *L* **28**   # i-74

Hajduczenia, Marek   Bright House Network

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

"The CLT should be configured according to Table 100-12" - and what if it is not? Seems like an important requirement to be mandatory, unless power normalization does not really matter.
Later on the very same table is referenced in a normative requirement in line 35

SuggestedRemedy

Consider making it a normative requirement (if received power normalization is really needed - seems like it for sure) or changing into informative text, if there is no need for it. Optional requirements are odd

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.6.1**   *P* **109**   *L* **30**   # i-75

Hajduczenia, Marek   Bright House Network

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

A variable intermixed with text?

SuggestedRemedy

Please move into a separate subclause, like done in other locations

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.6.1**   *P* **110**   *L* **1**   # i-76

Hajduczenia, Marek   Bright House Network

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

Table title is incomplete: "Upstream OFDMA channel demodulator input power characteristics (con-"

SuggestedRemedy

Make sure it is complete, even when broken across line

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.6.1**   *P* **110**   *L* **14**   # i-77

Hajduczenia, Marek   Bright House Network

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

It would seem that footnote a) applies to both Minimum Set Point and Maximum Set Point - they are both defined referencing the same point (IMO)

SuggestedRemedy

Replicate footnote a) anchor for Minimum Set Point and Maximum Set Point

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.6.2**   *P* **110**   *L* **20**   # i-78

Hajduczenia, Marek   Bright House Network

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

There is a very long list of conditions under which CLT receiver is expected to obtain "frame loss ratio of less than or equal to 10-6". Are these conditions expected to be inclusive (all have to be met to allow Rx to achieve target FER) or not (only some are expected to be met to achieve FER)?

SuggestedRemedy

If the first option is correct (that is my inclination), change the statement to read: "The CLT shall achieve a received frame loss ratio of less than or equal to 10-6 when all of the following input load and channel conditions are met:

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.6.2**   *P* **110**   *L* **37**   # i-79

Hajduczenia, Marek   Bright House Network

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

"CLT is allowed to construct Grants according to its own scheduler implementation." - given that scheduler is NOT defined in Clause 103, it is an unnecessary statement, which brings questions on where such a scheduler be specified.

SuggestedRemedy

Strike

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-79**   Page 14 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.6.3**   *P* **111**   *L* **23**   # i-80

Hajduczenia, Marek   Bright House Network

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

"This item provides measurements" - rather, "subclause"

SuggestedRemedy

Change to "This subclause provides measurements"

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.6.3**   *P* **111**   *L* **30**   # i-81

Hajduczenia, Marek   Bright House Network

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

Meaningless optional requirement: "A sufficient number of upstream probe symbols should be used for a reliable estimate of RxMER." - how would it be expected to be tested?

SuggestedRemedy

Change to "The OLT uses a sufficient number of upstream probe symbols for a reliable estimate of RxMER."

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.6.3**   *P* **111**   *L* **30**   # i-82

Hajduczenia, Marek   Bright House Network

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

Since M is not defined, the statement is meaningless: "An ensemble of M frequency-averaged
RxMER measurements (M large enough for reliable statistics, i.e. such that the result lies within a desired
confidence interval) would be sufficient for a given level of confidence in the estimate."

SuggestedRemedy

Strike it

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.6.3.1**   *P* **112**   *L* **5**   # i-83

Hajduczenia, Marek   Bright House Network

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

Incomplete statement: "When TRUE this variable indicates that the values RxMER_SC(n) for the CNU indicated by RxMER_CNU_ID or the OFDM channel indicated by RxMER_ChID." - what happens / is wrong with the values "indicated by RxMER_CNU_ID or the OFDM channel indicated by RxMER_ChID" ???

SuggestedRemedy

Please finish the statement

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.7.1**   *P* **112**   *L* **13**   # i-84

Hajduczenia, Marek   Bright House Network

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

Way too many requirements for the same thing: "The CNU shall meet .. ", " The CNU receiver shall meet...", and "The OFDM signals and CNU interfaces shall have ..."
First, we cannot make requirements towards "OFMD signals", given that it is what the channel model is supposed to define, and these have been covered before, I believe. Strike the statement: "The OFDM signals and CNU interfaces shall have the characteristics and limitations defined in Table 100-14."
Second, requirements towards CNU and CNU receiver and overlapping - without clear delineation, it is a single shall test point anyway, given that it points to a single table. Change "The CNU shall meet all performance specification when receiving a signal conformant to the parameters shown in Table 100-14. The CNU receiver shall meet electrical parameters per Table 100-14." to "The 10GPASS-XR-U PMD receiver shall meet electrical performance requirements per Table 100-14."
Update respective PICS.
Remove any requirements for OFDM *signal* itself, and put these into the channel model. that is where they should be located, not in the receiver requirements

SuggestedRemedy

Per comment

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-84**   Page 15 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.7.1**   *P* **112**   *L* **32**   # i-85

Hajduczenia, Marek   Bright House Network

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

"Maximum average power per MHz input to the CNU from 54 MHz to 1.794 GHz" -
equation is defined in table, which is hard to read and interpret

SuggestedRemedy

Move the equation outside the table and reference it inside of the table per "see Equation
100-XXX"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.7.1**   *P* **113**   *L* **1**   # i-86

Hajduczenia, Marek   Bright House Network

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

More footnotes separated from tables

SuggestedRemedy

Please make sure they go together with the table for improved readability

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.7.3**   *P* **114**   *L* **8**   # i-87

Hajduczenia, Marek   Bright House Network

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

Conflicting definitions
Page 114, line 8: "RxMER is defined as the ratio of the average power of the ideal QAM
constellation to the average error-vector power"
Page 111, line 23: "RxMER is defined as the ratio of the average power of the ideal BPSK
constellation to the average error-vector power"
Which is it then?

SuggestedRemedy

Rationalize - either it is one and the same (then which one is correct??) or expand the
acronym to reflect that one is for QAM and another for BPSK constellation

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.7.3**   *P* **114**   *L* **38**   # i-88

Hajduczenia, Marek   Bright House Network

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

Repeated (though rephrased) requirement:
Page 114, line 3: "The CNU receiver shall provide measurements of the downstream
receive modulation error ratio (RxMER) for each subcarrier in all enabled OFDM channels."
Page 114, line 38: "The CNU shall be capable of providing measurements of RxMER for all
active subcarrier locations for each OFDM downstream channel, using pilots and PHY Link
preamble symbols."
I suggest these be combined into a single statement, since they are almost identical
anyway

SuggestedRemedy

Strike text on Page 114, line 38
Change text on Page 114, line 38 to read "The CNU provide measurements of downstream
receive modulation error ratio (RxMER) for all active subcarrier locations for each OFDM
downstream channel, using pilots and PHY Link preamble symbols."
I suggest these be combined into a single statement, since they are almost identical
anyway
Update PICS

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.7.3**   *P* **115**   *L* **16**   # i-89

Hajduczenia, Marek   Bright House Network

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

The text in Figure 100-4, box: 10xlog10 does not need ot be broken into two lines

SuggestedRemedy

Make sure text is not broken into two lines - there is enough space to make box wider and
make sure it is not broken across lines
Similarly, box with "Mag Squared" - should be changed to "Magnitude Squared" ???

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-89**   Page 16 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.7.3**   *P* **115**   *L* **1**   # i-90
Hajduczenia, Marek   Bright House Network

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

Figure 100-4 seems to be artificially broken across the Error Vector [e]

SuggestedRemedy

Suggest that the line from top of the figure (Error vector e) be continued to input of Error vector e in the lower part of the figure, showing continuity in terms of electrical signal
Now the continuity is only logical (same value?)

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.8.1**   *P* **115**   *L* **38**   # i-91
Hajduczenia, Marek   Bright House Network

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

What does it really mean: "The CLT ensures that the encompassed spectrum of each 192 MHz downstream OFDM channel does not exceed 190 MHz and does not exceed 3800 active subcarriers (see Table 100-3)." - the only thing that the OLT can do is use up to 192 MHz of spectrum and up to 3800 active subcarriers, but apart from that, I am not clear what else the OLT can ensure. This statement and the whole subclause 100.3.8 seems to be a restatement of existing requirements scattered through the rest of Clause 100.

SuggestedRemedy

It would make sense to include some of these requirements in PMD specification tables instead, and make them normative. The current informative text is kind of in the middle - it provides some information, but it is not normative anyway.

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.8.1**   *P* **115**   *L* **46**   # i-92
Hajduczenia, Marek   Bright House Network

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

Confusing text of the note: "within the entirety of the downstream spectrum on a coax cable distribution network, EPoC will be operating
concurrently with other cable operator services: e.g. video channel, etc. Collectively, these are referred to as non-OFDM
channels in the context of these downstream channel bandwidth rules.

SuggestedRemedy

Simplify to read: "The term "non-OFDM channels" describes other applications using downstream spectrum concurrently with EPoC, per channel model in Annex 100A." - there si no need to create examples, when theya re already included in Annex 100A describign teh channel model

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.8.2**   *P* **115**   *L* **51**   # i-93
Hajduczenia, Marek   Bright House Network

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

"The CLT and CNU are not expected to meet performance and fidelity requirements when the system configuration
does not comply with the downstream exclusion band rules listed below. These rules apply to each
OFDM channel and also to the composite downstream inclusive of OFDM and non-OFDM channels." - really? We usually state conditions under which PMD pair can operate, and anythign outside of these boundries is no-mans' land. No need to state this explicitly

SuggestedRemedy

Change to read: "The downstream exclusion band rules listed below apply to each OFDM channel:"

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.8.2**   *P* **116**   *L* **5**   # i-94
Hajduczenia, Marek   Bright House Network

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

CFR 76 is not defined anywhere

SuggestedRemedy

Add to list of references, if needed

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-94**   Page 17 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.8.2**   *P* **116**   *L* **5**   # i-95

Hajduczenia, Marek   Bright House Network

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

"The ONLY exception" - why is ONLY capitalized?

SuggestedRemedy

We do not use capitalization as emphasis in standard. If something is very important, it becomes a requirement of a sort. Drop case down

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.3.8.2**   *P* **115**   *L* **50**   # i-96

Hajduczenia, Marek   Bright House Network

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

Havign read the whole of 100.3.8, I am still confused as to what 100.3.8.2 and 100.3.8.4 really define. Are these intended to cover rules for where exclusion bands can be placed - if so, it is not clear right now, especially in 100.3.8.4, where just three bullets are provided within any context

SuggestedRemedy

If these are expected to be requirements for channel for EPoC, these ought to be converted into requirements and moved into Annex 100A which was created to account for channel model. If not, I am not sure what the value 100.3.8.2 and 100.3.8.4 really have, given that they are not bound into the PMD requirements in any way right now

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4**   *P* **116**   *L* **39**   # i-97

Hajduczenia, Marek   Bright House Network

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

Forward reference to Figures. It would seem that interafces are really defined in Clause 101, while they are used for description of operation of PMD in Clause 100 as well.

SuggestedRemedy

Move Figures 101-1 though 101-4 to Clause 100, into 100.4, where they are first referenced.

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4.1**   *P* **116**   *L* **45**   # i-98

Hajduczenia, Marek   Bright House Network

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

The specified limit applies ..." - wher is this limit specified?

SuggestedRemedy

Per comment

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4.1**   *P* **116**   *L* **48**   # i-99

Hajduczenia, Marek   Bright House Network

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

Missing space in "TP1/MD1of"

SuggestedRemedy

Per comment

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4.1**   *P* **116**   *L* **28**   # i-100

Hajduczenia, Marek   Bright House Network

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

Repeated requirement - Table 100-3 is already mandatory: "The output return loss at TP1/MD1of the muted device shall comply with the Output
Return Loss requirements for inactive OFDM channels given in Table 100-3."

SuggestedRemedy

Remove the requirement, make it into statement. Remove any assoiated PICS

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-100**   Page 18 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.4.1**   *P* **116**   *L* **53**   # i-101

Hajduczenia, Marek   Bright House Network

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

An odd way to define a requirement - "When this variable is set to TRUE the CLT shall set the RF output power = 73 dBc" - this should be part of Table 100-3 (similar to power output in OFF state for optical Tx in EPON), while it is not there

SuggestedRemedy

Move the requirement to Table 100-3. Change the definition of "CLT_TxMute" to read as follows: "When this variable is set to TRUE the CLT sets the RF output power = 73 dBc (see Table 100-3) below the operationally configured aggregate power of the RF modulated signal, in every 6 MHz channel from 258 MHz to 1218 MHz."
Remove any associated PICS

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.4.2**   *P* **117**   *L* **16**   # i-102

Hajduczenia, Marek   Bright House Network

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

"A minimum warm-up time of 30 minutes occurs before measurements are made." - if the measurements are time correlated in any way, measurements should be performed in discrete intervals, e.g., every 5 minutes for a specific number, and then mean and deviation should be presented. Otherwise, it is hardly a measurement at all - you pick one point of time, at an arbitrary distance (30 minutes) from start-up time and treat that as a true value

SuggestedRemedy

Add information that RxMER is a mean value for X number of measurements, starting from 30 minutes, occuring every X minutes for Y total measurement time
The last bullet kind of goes in that direction, but M remains undefined, measurement frequency is also undefined ("are taken in succession (e.g., over a period of up to 10 minutes) at both CNR values" - does not provide for repeatabilty of measurements across vendors
Mean and deviation are not provided as normative parameters today, just the mean, which is kind of meaningless, given the variability expected in this parameter over the range of measurements

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.4.2**   *P* **117**   *L* **27**   # i-103

Hajduczenia, Marek   Bright House Network

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

Requirements out of place: "The CNU shall provide RxMER measurements with RxMER_std ≤ 0.5 dB under the above specified conditions.
Define delta_RxMER = (RxMER_mean at CNR_data_subcarrier = 35 dB) - (RxMER_mean at CNR_data_-
subcarrier = 30 dB). The CNU shall provide RxMER measurements such that 4 dB ≤ delta_RxMER ≤ 6 dB
under the above specified condition."

SuggestedRemedy

Move these requirements into 100.3.7.3, which already covers RxMER for CNU, but does not really have any requrements ...
Update PICS accordingly

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.4.3**   *P* **117**   *L* **45**   # i-104

Hajduczenia, Marek   Bright House Network

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

"The CLT shall provide upstream power measurements with a standard deviation of 0.33 dB or better under the following test conditions" - this should go into 100.3.6 where CLT Rx requirements are listed, and text in 100.4.3 should be made informative, as far as measurement conditoons are concerned

SuggestedRemedy

Per comment + update PICS accordingly

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-104**   Page 19 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.4.3**   *P* **117**   *L* **41**   # i-105

Hajduczenia, Marek   Bright House Network

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

Seems like product requirements: "The CLT should provide an estimate of total received power in a specified OFDMA channel at the TP1 reference
input point, for a single specified upstream user. The CLT should provide configurable averaging
over a range at least including 1 to 32 probes."

SuggestedRemedy

Remove, these are product requirements, unless we have associated requirements for these specific values
Remove PICS

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4.4**   *P* **118**   *L* **23**   # i-106

Hajduczenia, Marek   Bright House Network

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

This has nothing to do with measurement methods - these are CLT TX requirements

SuggestedRemedy

If these are needed, move them to 100.3.6 in appropriate location.
Update PICS as needed

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4.4**   *P* **118**   *L* **29**   # i-107

Hajduczenia, Marek   Bright House Network

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

Definition of CW signal is hidden in a footnote on page 99 ... odd

SuggestedRemedy

Expand CW to "Continuous Wave (CW)" in Table 100-16

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.4.4**   *P* **119**   *L* **30**   # i-108

Hajduczenia, Marek   Bright House Network

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

It seems like specific test modes are defined in here and in line 52, and they are "hidden" in the text itself.

SuggestedRemedy

Suggest to create
- 100.4.4.1 Test Mode 1 and include page 119, lines 30-50 in this new subclause
- 100.4.4.2 Test Mode 2 and include page 119, lines 52-54, and page 120, lines 1-8 in this nes cubalsue
Update PICS accordingly

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.5.3**   *P* **120**   *L* **28**   # i-109

Hajduczenia, Marek   Bright House Network

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

"It is recommended that manufacturers indicate in the literature associated with the PHY" - we do not p[rescribe where it needs to be indicated. Technical notes, summary notes, etc. are also allowed. Poems might be a tad too much

SuggestedRemedy

Change to "It is recommended that manufacturers indicate ..."
Similar change in line 30

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID*   **i-109**   Page 20 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.6**   *P* **120**   *L* **42**   # i-110

Hajduczenia, Marek   Bright House Network

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

Untestable requirement: "For the 10GPASS-XR-U PHY the CNU shall enable Energy-Efficient Ethernet (EEE) capability to conserve energy by deactivating power-consuming PMD Functions (e.g. RF power amplifier) between bursts using PMD_SIGNAL.request (see 100.2.1.4)."

SuggestedRemedy

The very nature of EPoC (like EPON) implies that transmit path is disabled in between bursts.
Change the text to read: "In order to support EEE-like power saving, the 10GPASS-XR PHYs may deactivate some PHY functional blocks, e.g., RF power amplifier, between individual data bursts (in case of 10GPAS-XR-U PHY), disable some of OFDM channels (in case of 10GPAS-XR-D PHY) when traffic load is low, or use other vendor-specific mechanisms to lower the overal PHY consumption without affecting the latency and BER on the EPoC link." - this is as good as we can do here without specific hooks for EEE at the PHY layer

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **299**   *L* **8**   # i-111

Hajduczenia, Marek   Bright House Network

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

"in which passive and usually active elements" - sounds like these "usually active" elements can be also passive at times.

SuggestedRemedy

Change to "in which both passive and active elements"

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **299**   *L* **23**   # i-112

Hajduczenia, Marek   Bright House Network

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

Comment bait: "Topics dealt with in this clause include allocation of upstream transmission resources to different CNUs,
discovery and registration of CNUs into the network, and reporting of congestion to higher layers to allow
for dynamic bandwidth allocation schemes and statistical multiplexing across the CCDN.
This clause does not deal with topics including bandwidth allocation strategies, authentication of enddevices,
quality-of-service definition, provisioning, or management." - line 30 already states what is being specified in this clause, and everything else is NOT specified. Period

SuggestedRemedy

Strike text "Topics dealt with in this clause include allocation of upstream transmission resources to different CNUs,
discovery and registration of CNUs into the network, and reporting of congestion to higher layers to allow
for dynamic bandwidth allocation schemes and statistical multiplexing across the CCDN.
This clause does not deal with topics including bandwidth allocation strategies, authentication of enddevices,
quality-of-service definition, provisioning, or management."

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.1**   *P* **300**   *L* **1**   # i-113

Hajduczenia, Marek   Bright House Network

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

Even at high level, Figure 103-1 does not resemble Figure 100A-1, which shows amplifiers (not feeder) and contains mor details - there are taps, and splitter are only at home/

SuggestedRemedy

Either replace everything between CLT and CNUs with cloud and name it CCDN (that is the level needed for Clause 103) or reproduce Figure 100A-1 in here

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-113**   Page 21 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **103**   *SC* **103.1**   *P* **300**   *L* **26**   # i-114
Hajduczenia, Marek   Bright House Network

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

These are not PRIOR versions, just versions. EPoC MPCP cannot be executed on EPON, just like EPON MPCP cannot be executed on EPoC without changes

SuggestedRemedy

Change: "The EPoC Multipoint MAC Control shares much in common with prior versions of the Multipoint MAC Control protocol defined in Clause 64 and Clause 77." to "The EPoC Multipoint MAC Control shares operating principles with the Multipoint MAC Control protocol defined in Clause 64 and Clause 77."

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.2.2**   *P* **305**   *L* **1**   # i-115
Hajduczenia, Marek   Bright House Network

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

There does not seem to be anything different in 103.2.2 when compared with 77.2.2, apart from CLT and CNU labels - does that require importing all figures into the new Clause?

SuggestedRemedy

In other locations 802.3, there are cases where text was marked as applicable, with some listed changes. Here, change "The purpose and high level functionality of multipoint transmission control is similar to those described in 77.2.2 for EPON." to "The purpose and high level functionality of multipoint transmission control is similar to those described in 77.2.2 for EPON, including Figure 77-6 through Figure 77-9, where the term "ONU" is replaced with "CNU" and the term "OLT" is replaced with "CLT"."
Strike Figure 103-4 through Figure 103-7

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.2.2.4**   *P* **311**   *L* **29**   # i-116
Hajduczenia, Marek   Bright House Network

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

The issue with these equations is the use of very long and wordy names of functions and parameters: Derating_Overhead, DS_FEC_CW_Sz_FRAC, etc. The names are meaningless anyway, and could be easily replaced with simpler and shorter versions, e.g., DS_FEC_CW_Sz_FRAC with DS_FEC_Frac, Derating_Overhead with DerateO, FEC_Overhead with FecO, etc. - allowing equations to actually fit into a single line to improve readability

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.2.2.7**   *P* **313**   *L* **7**   # i-117
Hajduczenia, Marek   Bright House Network

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

Too many brackets: ceil((XGMII_Rate/PCS_Rate-1) * DS_FEC_CW_Sz_FRAC)) - 2 were open, three were closed

SuggestedRemedy

Change to: ceil((XGMII_Rate/PCS_Rate-1) * DS_FEC_CW_Sz_FRAC)

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.2.2.7**   *P* **314**   *L* **1**   # i-118
Hajduczenia, Marek   Bright House Network

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

Figure 103-9 is no different than Figure 77-10

SuggestedRemedy

Remove Figure 103-9 and replace all references with Figure 77-10

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-118**   Page 22 of 68
2/22/2016 1:48:27 PM

Cl **103**   *SC* **103.2.2.7**   *P* **315**   *L* **1**   # i-119
Hajduczenia, Marek   Bright House Network

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

Figure 103-10 is no different than Figure 77-11, excluding guardThresholdCLT which is guardThresholdOLT in Figure 77-11 - a change that can be described in words.

SuggestedRemedy

Remove Figure 103-10 and replace all references with Figure 77-11

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.2.2.7**   *P* **316**   *L* **1**   # i-120
Hajduczenia, Marek   Bright House Network

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

Figure 103-11 is no different than Figure 77-12, excluding guardThresholdCNU which is guardThresholdONU in Figure 77-12 - a change that can be described in words.

SuggestedRemedy

Remove Figure 103-11 and replace all references with Figure 77-12

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.2.2.7**   *P* **316**   *L* **24**   # i-121
Hajduczenia, Marek   Bright House Network

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

Name of state in PARSE OPCODE state overlaps with top border of the state

SuggestedRemedy

Please move the text a bit down, so that it does not overlap with the top edge of the state box

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.3.2.2**   *P* **319**   *L* **23**   # i-122
Hajduczenia, Marek   Bright House Network

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

Reference to 77.3.2.2 is sufficient - it already contains reference to 76.2.6.1.3.2

SuggestedRemedy

Change text in lines 23-24 to read: "Optional Shared LAN emulation for EPoC is the same as described in 77.3.2.2."

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.3.2.3**   *P* **319**   *L* **23**   # i-123
Hajduczenia, Marek   Bright House Network

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

Reference to 77.3.2.3 is sufficient - it already contains reference to 76.2.6.1.3.2

SuggestedRemedy

Change text in lines 28-30 to read: "Multicast and single copy broadcast support in EPoC is the same as described in 77.3.2.3."

Proposed Response   *Response Status* **O**

Cl **103**   *SC* **103.3.3**   *P* **320**   *L* **1**   # i-124
Hajduczenia, Marek   Bright House Network

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

Figure 103-14/15/16 is no different from Figure 77-16/17/18, apart from the statement already included in the draft: "The laserOnTime and laserOffTime parameters in 77.3.3 are replaced in EPoC with
rfOnTime and rfOffTime, respectively."

SuggestedRemedy

Strike Figure 103-14/15/16

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-124**   Page 23 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **103**   *SC* **103.3.3.1**   *P* **321**   *L* **28**   # i-125
Hajduczenia, Marek   Bright House Network

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

This is the strangest definition yet: This variable holds the time required to terminate the
RF and is included for consistency with Clause 77. - it is defined but has the value of zero.
The same applies to rfOnTime

SuggestedRemedy

A cleaner approach would be remove them altogether, given that they are not used for
anything. If you want to keep them, change definition of rfOffTime to "PlaceholderOff: This
variable replaces laserOffTime in Clause 77." and rfOnTime to read: "PlaceholderOn: This
variable replaces laserOnTime in Clause 77." - since these do not hold really any meaning,
do not pretend they have some meaning.
Similar observation applies to syncTime on page 322, line 18, which is only present for
"compatibility" purposes

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.3.4**   *P* **323**   *L* **18**   # i-126
Hajduczenia, Marek   Bright House Network

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

Is there any special reason why rfOnTime and rfOffTime are in italics, when most other
parameters are not?

SuggestedRemedy

Either use italics for all parameters, or do not - right now it is almost half/half for no special
reason

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.3.5**   *P* **325**   *L* **52**   # i-127
Hajduczenia, Marek   Bright House Network

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

Figure 103-17 was modified from Figure 77-19 by removing the discoveryInformation
parameter. This begs a question - instead of trying to maintain "compatibility" with existing
Clause 77 MPCP, wouldn't it be clearer to remove rfOnTime, rfOffTime, and sync_time
parameters everywhere, and just make Clause 103 cleaner in this way?

SuggestedRemedy

Per comment

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.5**   *P* **330**   *L* **31**   # i-128
Hajduczenia, Marek   Bright House Network

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

Figure 103-22 does not seem to be any different from Figure 77-27.

SuggestedRemedy

Remove 103-22 and replace all references to 77-27, which is functionally the same

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.5.1**   *P* **330**   *L* **46**   # i-129
Hajduczenia, Marek   Bright House Network

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

What is the unit for min_processing_time? Please clarify what 1024 really means (us, TQ,
something else?)

SuggestedRemedy

In 77.3.5.1, it is defined as: VALUE: 0x00000400 (16.384 us)

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.5.2**   *P* **331**   *L* **1**   # i-130
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **D**   *2 IDLES*

I was looking for justification of the "two leading IDLE vectors of the payload" - there was a
purpose for them in 10G-EPON, but it is not clear what they are used for in EPoC.

SuggestedRemedy

The pointer to 101.3.2.5.7 does not help

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-130**   Page 24 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **103**   *SC* **103.3.5.2**   *P* **331**   *L* **12**   # i-131

Hajduczenia, Marek   Bright House Network

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

Compound adjectives needs to be hyphenated: 48 bit unsigned, 32 bit unsigned, 16 bit unsigned, etc.

SuggestedRemedy

Change to "48-bit unsigned, 32-bit unsigned, 16-bit unsigned"
Scrub the rest of the draft, there are more instances

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.5.2**   *P* **332**   *L* **15**   # i-132

Hajduczenia, Marek   Bright House Network

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

"RB_total_time = RB_time_quanta * Number_of_Burst_RBs" - "*" symbol is assigned a logical AND meaning assigned. Use "x" symbol instead

SuggestedRemedy

Per comment
There are multiple instances in equations

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.5.6**   *P* **335**   *L* **36**   # i-133

Hajduczenia, Marek   Bright House Network

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

Figure 103-23 is the same as Figure 77-28

SuggestedRemedy

Remove 103-23 and replace all reference with Figure 77-28

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.6.1**   *P* **338**   *L* **8**   # i-134

Hajduczenia, Marek   Bright House Network

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

Why not set rfOnTime, rfOffTime, and sync-time, together with discoveryInformation to zeros, and skip changining Clause 77 where not needed?

SuggestedRemedy

Change "In EPoC rfOnTime and rfOffTime replace laserOnTime and laserOffTime, respectively. The Sync Time and Discovery Information fields described in 77.3.6.1 are not used in EPoC and shall be set to zero on transmit and ignored on reception." to "In EPoC laserOnTime, laserOffTime, Sync Time, and Discovery Information fields described in 77.3.6.1 are not used and shall be set to zero on transmit and ignored on reception."
Update PICS accordingly
Similar change in 103.3.6.3, where REGISTER_REQ is being defined. Then Figure 103-26 can be removed altogether (not needed anymore, would be exactly the same as in 10G-EPON)
In 103.3.6.4, given that laserOnTime and laserOffTime in EPoC would be sent as zeros, the SyncTime can be then calculated using rules for 10G-EPON, and still arrived to the same target value (zero). Then replace text in 103.3.6.4 with "The REGISTER MPCPDU used in EPoC is the same as that described in 77.3.6.4." and remove Figure 103-27.

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.3.6.2**   *P* **338**   *L* **15**   # i-135

Hajduczenia, Marek   Bright House Network

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

Double reference without any need: in 77.3.6.2 (see 64.3.6.1).

SuggestedRemedy

Change to "in 77.3.6.2"

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-135**   Page 25 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **103**   *SC* **103.4.4.2**   *P* **343**   *L* **6**   # i-136
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
Is there any reason for OM1 and OM2 to track Clause 64 and not Clause 77 (77.2.2.2) instead?

SuggestedRemedy
Change 64.2.2.2 to 77.2.2.2

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.1**   *P* **127**   *L* **9**   # i-137
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**   *EZ*
Unnecessary detail - already included in definition of CCDN: "passive or amplified"

SuggestedRemedy
Remove "passive or amplified"

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.1.1**   *P* **127**   *L* **18**   # i-138
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**
For some reason, "--" and "++" look different than "-+" (they seem tobe bolded?)

SuggestedRemedy
Make sure "--" and "++" does not look different than "+=" and "-=" symbols defined in the same subclause

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.1.4**   *P* **132**   *L* **1**   # i-139
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
"Clause 103 replicates functions of Clause 77 Multipoint MAC Control Protocol (MPCP) with updates necessary for EPoC operation" - this sounds a bit odd

SuggestedRemedy
Change to "Clause 103 defines Multipoint MAC Control Protocol (MPCP) for operation in EPoC, extending Clause 77 model as necessary."

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.1.4**   *P* **132**   *L* **19**   # i-140
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **D**
The relationship between SCRAMBLER and FCP GENERATION is not clear. It seems that data is inserted into SCRAMBLER but there is also FCP GENERATION operating at the same level, feeding PHY Link

SuggestedRemedy
Given that the FCP provides codeword pointer for FEC encoded data, it would seem be more reasonable to show FCP to generated by FEC Encoder, and not SCRAMBLER.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.2.1.1**   *P* **138**   *L* **42**   # i-141
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**   *EZ*
Off formatting for DS_PHY_Dsize - "DS_" is not italicized, while the rest of the term is. Why?

SuggestedRemedy
Italicize the term for consistency with other terms shown in italics. Multiple instances

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-141**   Page 26 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**	*SC* **101.3.2.1.1**	*P* **139**	*L* **15**	# i-142

Hajduczenia, Marek	Bright House Network

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

Given that there is only one xMII used by this standard, there is no need to create a constant for XGMII data rate. Originally, the standard was supposed to use 1G and 10G MIIs, at which time a variable / constant made sense.

SuggestedRemedy

Remove XGMII_Rate and replace with a fixed constant value of 10 in all equations

Proposed Response	*Response Status* **O**

Cl **101**	*SC* **101.3.2.1.2**	*P* **139**	*L* **50**	# i-143

Hajduczenia, Marek	Bright House Network

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

Given the equation 101-02, it seems that PCS_Rate is really a downstream only PCS data rate

SuggestedRemedy

Rename to PCS_DS_Rate if you stick with the current naming convention

Proposed Response	*Response Status* **O**

Cl **101**	*SC* **101.3.2.1.5**	*P* **141**	*L* **1**	# i-144

Hajduczenia, Marek	Bright House Network

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

Figure 101-6 use think line boxes for states, while most of other dtate diagrams use thick boxes for states. See Figure 103-8 for an example

SuggestedRemedy

Consider aligning format of state diagrams for consistency

Proposed Response	*Response Status* **O**

Cl **101**	*SC* **101.3.2.1.5**	*P* **141**	*L* **26**	# i-145

Hajduczenia, Marek	Bright House Network

Comment Type **T**	*Comment Status* **D**	+=

Note that += and -= operators were defined, but are not used in the UPDATE_COUNTERS state

SuggestedRemedy

Change
accResidue = accResidue + PHY_OSizeFrac
countDelete = countDelete + (DS_PHY_OSize + floor(accResidue))
accResidue = accResidue - floor(accResidue)
to
accResidue += PHY_OSizeFrac
countDelete += (DS_PHY_OSize + floor(accResidue))
accResidue -= floor(accResidue)

Proposed Response	*Response Status* **O**

Cl **101**	*SC* **101.3.2.1.5**	*P* **142**	*L* **40**	# i-146

Hajduczenia, Marek	Bright House Network

Comment Type **T**	*Comment Status* **D**	+=

Note that += and -= operators were defined, but are not used in the UPDATE_COUNTERS state

SuggestedRemedy

Change
countDelete = countDelete + DS_PHY_OSize + DS_FEC_Osize
to
countDelete += DS_PHY_OSize + DS_FEC_Osize

Proposed Response	*Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general	*Comment ID* **i-146**	Page 27 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected	RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn	2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.3.2.2**   *P* **142**   *L* **50**   # i-147

Hajduczenia, Marek   Bright House Network

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

Unnecessary details: "The EPoC PHY utilizes a 64B/66B Encoder based on that described in 49.2.5 with several important differences. The EPoC 64B/66B Encoder does not include a scrambler function as described in 49.2.6 and the output is a 65B block with a single synch header bit."

SuggestedRemedy

Change to "The EPoC PHY utilizes a 64B/66B Encoder per 49.2.5." - unless you reference Scrambler, it is not used. Period

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.1**   *P* **147**   *L* **1**   # i-148

Hajduczenia, Marek   Bright House Network

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

Definition of the FIFO_FEC_TX is already present in 101.3.2.5.6, where it should be.

SuggestedRemedy

Remove lines 1-7

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.2**   *P* **147**   *L* **11**   # i-149

Hajduczenia, Marek   Bright House Network

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

Unit of size missing in "a single FEC LDPC codeword size of 16200 indicated by "DS""

SuggestedRemedy

Change to "a single FEC LDPC codeword size of 16200 bits indicated by "DS""
There are other locations in this subclause where the size of parity and payload is expressed in numeric value without any units

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.2**   *P* **147**   *L* **26**   # i-150

Hajduczenia, Marek   Bright House Network

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

What does "specify" mean in this statement: "The resulting FP bits of data are then passed to the LDPC Encoder specifying a payload length of FP - BP bits."

SuggestedRemedy

??? Seems like a logical change would be to modify text to "The resulting FP bits of data are then passed to the LDPC Encoder operating on a payload of FP - BP bits."

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.2**   *P* **148**   *L* **36**   # i-151

Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**   *2 IDLES*

"two 65-bit Idle blocks" are shown in Figure 101-10 but never mentioned in text. Given the lack of self-synchronous scrambler, their purpose is questionable

SuggestedRemedy

Remove "two 65-bit Idle blocks" from Figure 101-10

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-151**   Page 28 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.3.2.5.4**   *P* **150**   *L* **6**   # i-152

Hajduczenia, Marek   Bright House Network

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

The description in lines 12-26 is a tad chaotic - it uses B to designate burst size but also number of 65-bit blocks available for transmission.

SuggestedRemedy

The upstream burst filling process is described as follows:
START: Add burst start marker. Move to STEP 1.
STEP 1: If the number of available 65-bit blocks (Bin) is sufficient to fill a long FEC codeword (BQ >= 220), create a long FEC codeword. Repeat STEP 1 as long as Bin >= 220; otherwise move to STEP 2.
STEP 2: If 220 > Bin >= 101, create a shortened long FEC codeword and move to END; otherwise move to STEP 3.
STEP 3: If 101 > Bin >= 76, create a medium FEC codeword. Move to STEP 4.
STEP 4: If 76 > Bin >= 25, create a shortened medium FEC codeword and move to END; otherwise move to STEP 5.
STEP 5: If 25 > Bin >= 12, create a short FEC codeword. Move to STEP 6.
STEP 6: If 12 > Bin >= 1, create a shortened short FEC codeword and move to END.
END: Add burst end marker.
use appropriate formatting, as needed

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.6**   *P* **150**   *L* **46**   # i-153

Hajduczenia, Marek   Bright House Network

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

"This variable represents the number of either 65-bit blocks input to the FEC Encoder." - the use of "either" implies an "on/nor" to complete the sentence, yet it is not present

SuggestedRemedy

Change to "This variable represents the number of 65-bit blocks input to the FEC Encoder." ?

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.6**   *P* **151**   *L* **10**   # i-154

Hajduczenia, Marek   Bright House Network

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

Variables seem to be ordered alphabetically apart from xfrSize, which is stuck now in between burstEnd and burstStart for some reason

SuggestedRemedy

Move xfrSize to proper location in the list

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **153**   *L* **3**   # i-155

Hajduczenia, Marek   Bright House Network

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

Unclear designation: "dataPayload<> and tx_coded_out<> to add CRC40 and appropriate LDPC parity. The tx_coded_out<>" - given the the size of arrays is not given, skip "<>" - they do not add anything and individual arrays are already defined separately and clearly.

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **153**   *L* **7**   # i-156

Hajduczenia, Marek   Bright House Network

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

Unclear what "global: " statement is. It does not follow any "C" language syntax, which is used as reference for pseudo-code in the introduction to Clause 101

SuggestedRemedy

Remove lines 7-8 - all variables are accessible as globals within the SD, no need to emphasize it over and over again.
Apply to all pseudocode in Clause 101

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-156**   Page 29 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.3.2.5.7**   *P* **153**   *L* **27**   # i-157
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status* **D**
 Extra spaces in resetArray(dataPayload); and resetArray(dataParity);

SuggestedRemedy
 Change ")" to ")"

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **153**   *L* **46**   # i-158
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status* **D**
 Code snippet for Check_dataPayload uses smaller font than
 Calculate_CRC40_and_3Parity (which I find more readable)

SuggestedRemedy
 Align the use of font size for code snippets

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **153**   *L* **10**   # i-159
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status* **D**
 Logical comparison operator (=) and assignment operator (=) are the same. Compare line
 10 and 17, for example.

SuggestedRemedy
 Use "==" as logical comparison for IF statements
 Applies to all code snippets (except page 155, lines 3-13, which seems to be using proper
 C++ syntax already)

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **153**   *L* **51**   # i-160
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status* **D**
 The code would be simpler to read if IF / ELSE was not used unless strictly necessary

SuggestedRemedy
 Change to read:
 IF (lastblock = FALSE AND blockCount = 220)
 <tab>Calculate_CRC40_and_3Parity(LONG);
 IF (lastblock = TRUE) {
 <tab>IF (blockCount < 200 AND blockCount >= 101)
 <tab><tab>Calculate_CRC40_and_3Parity(LONG);

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **154**   *L* **15**   # i-161
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status* **D**
 ELSE IF not needed -

SuggestedRemedy
 Change
 ELSE IF (blockCount >= 1) {
 Calculate_CRC40_and_3Parity(SHORT);
 }
 to
 IF (blockCount >= 1)
 <tab>Calculate_CRC40_and_3Parity(SHORT);

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **154**   *L* **23**   # i-162
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status* **D**
 Seems like formatting gone wrong

SuggestedRemedy
 Format text in lines 23/25 with T,Text and not as code snippet

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-162**   Page 30 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.3.2.5.7**   *P* **154**   *L* **27**   # i-163
Hajduczenia, Marek   Bright House Network

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

Inconsistent line delimiters - previous two code snippets used ";" as line delimiter. This code snippet does not use any

SuggestedRemedy

Decide whether line delimiters are needed, and then apply prevailing style to all code snippets in the draft

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **155**   *L* **9**   # i-164
Hajduczenia, Marek   Bright House Network

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

Inconsistent logical AND operator. Most locations use AND and here we have &&

SuggestedRemedy

Decide which of the logical operators syntax you want to follow and update code snippets accordingly. My personal preference would be for &&

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.2.5.7**   *P* **155**   *L* **15**   # i-165
Hajduczenia, Marek   Bright House Network

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

The way the NOTE is placed, it seems to apply to all functions in 101.3.2.5.7 and not just the last function

SuggestedRemedy

Either indent the NOTE to right to be visually part of the code snippet and move it above the code snippet, or make it part of the function definition, and not a separate NOTE for some reason

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.2.5.8**   *P* **156**   *L* **31**   # i-166
Hajduczenia, Marek   Bright House Network

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

Unnecessary operation in state diagram: tx_coded_out<FR+40-1:40>

SuggestedRemedy

Change to tx_coded_out<FR+39:40>

Proposed Response   *Response Status*   **O**

Cl **00**   *SC* **101.3.3.1.3**   *P* **160**   *L* **16**   # i-167
Hajduczenia, Marek   Bright House Network

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

Persistent use of "will" in multiple locations in the draft outside of FM. "the CLT will remove"

SuggestedRemedy

Please convert all cases of "will" to Present Simple statement (here: "the CLT removes"), unless the very specific use case of "will" is met, per Style Manual

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.3.3.1.4**   *P* **160**   *L* **26**   # i-168
Hajduczenia, Marek   Bright House Network

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

"The FEC Decoder in the CNU shall provide" - what happened with this function in the CLT, where it is more needed due to bursty feature of upstream channel?

SuggestedRemedy

Please consider adding support for signalling uncorrestable FEC codewords to CLT, where it is more useful and does not lead to additional new requirements (CRC40 is calculated in upstream anyway)

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-168**   Page 31 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.3.3.1.6**   *P* **161**   *L* **15**   # i-169

Hajduczenia, Marek   Bright House Network

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

The description of CRC40ErrCtrl variable is not correct - it implies right now that CRC40 is calculated for individual 66B vectors, and that is not the case - there is a single CRC40 per FEC codeword.

SuggestedRemedy

Change definition of CRC40ErrCtr to read: This variable controls the processing of 66B blocks recovered from FEC codewords that fail the CRC40 checksum test. When CRC40ErrCtrl is set to TRUE, all 66B blocks recovered from a FEC codeword that fail the CRC40 checksum test are flagged as errored. When CRC40ErrCtrl is set to FALSE, all 66B blocks recovered from a FEC codeword that fail the CRC40 checksum test are not marked in any way.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.3.1.6**   *P* **161**   *L* **37**   # i-170

Hajduczenia, Marek   Bright House Network

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

Missing closing bracket in dataIn<(dataInSize-1:0>

SuggestedRemedy

Change to dataIn<dataInSize-1:0>

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.3.1.8**   *P* **163**   *L* **12**   # i-171

Hajduczenia, Marek   Bright House Network

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

Text in line 12 is 1 pt smaller than in remaining text.

SuggestedRemedy

Please applt T,Text and remove any overrides in this line

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.3.1.8**   *P* **164**   *L* **18**   # i-172

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**   +=

I believe += and -= operands are defined

SuggestedRemedy

Change loc = loc + 65 to loc+ = 65 (twice on page 164)
Change loc = loc + (40 + BP) to loc += (40 + BP)

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.3.1.8**   *P* **164**   *L* **26**   # i-173

Hajduczenia, Marek   Bright House Network

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

"CLK" is written in different font than the res of the SD. There are also scattered characters which look to be using different font, e.g.. "d" in tx_code<1> dataOut<loc> (line 40, state DECODE_FAIL)

SuggestedRemedy

Please make sure that consistent fonts are used in the SDs!

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.1**   *P* **169**   *L* **5**   # i-174

Hajduczenia, Marek   Bright House Network

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

per primitive definitions "a stream of IQ data pairs" is not correct, since it is a stream of I/Q pairs with channel number information

SuggestedRemedy

Change "a stream of IQ data pairs" to "a stream of I/Q data pairs and channel number" Also, glovally align the use of "IQ pair" and "I/Q pair" - I believe these are intended to be the same

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-174**   Page 32 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.1.1**   *P* **169**   *L* **20**   # i-175

Hajduczenia, Marek   Bright House Network

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

Something went wrong with the variable definitions: "DS_PrflCpy ,DS_CpyCh, and US_PrflCpy variables"

SuggestedRemedy

Change to "DS_PrflCpy, DS_CpyCh, and US_PrflCpy variables" and make sure DS_CpyCh is written in italics

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.1.1**   *P* **169**   *L* **19**   # i-176

Hajduczenia, Marek   Bright House Network

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

The mechanics of profile change belong to Clause 102, and not Clause 101.

SuggestedRemedy

Move text from lines 19-30 to Clause 102 into proper location

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.2**   *P* **170**   *L* **22**   # i-177

Hajduczenia, Marek   Bright House Network

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

Definition of PMA primitives is not consistent between 101.4.2 and Figures 101-1/2/3/4

SuggestedRemedy

Update Figures 101-1/2/3/4 to match PMA_UNITDATA primitive syntax

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.2.1.2**   *P* **170**   *L* **48**   # i-178

Hajduczenia, Marek   Bright House Network

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

When multiple NOTEs are added one after another, they should be numbered

SuggestedRemedy

Please add numbers to NOTEs

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.2**   *P* **172**   *L* **39**   # i-179

Hajduczenia, Marek   Bright House Network

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

There is requirement for downstream clock synchronization: "CLT transmitters and CNU receivers shall conform to the requirements given in Table 101-7." - what about upstream direction? The CLT and CNU clocks are not synchronized?

SuggestedRemedy

Please add either a requirement for upstream or informative text explaining why there is no requirement for upstream (perhaps it is not needed)

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.3**   *P* **173**   *L* **36**   # i-180

Hajduczenia, Marek   Bright House Network

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

Odd equation 101-6: $((2(10))/4096)$ - what is the operand between 2 and 10?

SuggestedRemedy

Please clarify what operand is expected between 2 and 10

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-180**   Page 33 of 68

COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM

SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.3.3**   *P* **174**   *L* **6**   # i-181

Hajduczenia, Marek   Bright House Network

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

Equation 101-8 is not the final form

SuggestedRemedy

Change to: "6.4 x DSNcp", which is simpler and avoids unnecessary multiplications and exponents

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.6.1**   *P* **177**   *L* **13**   # i-182

Hajduczenia, Marek   Bright House Network

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

The figure is hardly sufficiently detailed for a normative reference.

SuggestedRemedy

Change The scattered pilot pattern shall be synchronized to the PHY Link as illustrated in Figure 101-20." to "The scattered pilot pattern are synchronized to the PHY Link as illustrated in Figure 101-20."
The requirement on page 178 is sufficient, where a mathematical formula is used

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.6.3**   *P* **179**   *L* **20**   # i-183

Hajduczenia, Marek   Bright House Network

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

Is there any difference between "spectral band", "spectral region", and "spectrum"?

SuggestedRemedy

Right now it seems to me that we are using three different terms to define the same concept, i.e., a contiugous amount of RF spectrum
Please cosider consolidating terms

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.6.4**   *P* **180**   *L* **15**   # i-184

Hajduczenia, Marek   Bright House Network

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

Not sure what "190e6" in Eq 101-9 is expected to mean. Is "6" supposed to be the expotent?

SuggestedRemedy

Please fix the equation

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.6.4**   *P* **180**   *L* **25**   # i-185

Hajduczenia, Marek   Bright House Network

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

"The typical value proposed for CntPltSF is 48." - is this expected to be a default value? If so, it should be marked accordingly. If not, remove the statement, it means nothing

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.7**   *P* **182**   *L* **22**   # i-186

Hajduczenia, Marek   Bright House Network

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

This seems like a set of requirements you'd want to be mandatory: "The CLT initializes the scrambler at the
first codeword of the downstream frame. The CNU initializes the scrambler with the hexadecimal value at
the beginning of each grant."

SuggestedRemedy

Convert into "shall" statements + add PICS for them.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-186**   Page 34 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.3.8.1**   *P* **182**   *L* **31**   # i-187
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**
It is not clear what "begins by" is supposed to imply - it initializes scrambler and other
functions. Period

SuggestedRemedy
Change to "Initializes (resetting) the scrambler function (see 101.4.3.7), sets an FCPbitCnt
to to 1 (see 101.4.3.8.7), and initializes the mapping function with the lowest numbered
active subcarrier."

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.8.1**   *P* **182**   *L* **35**   # i-188
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**   *EZ*
Variable formatting

SuggestedRemedy
Put burstStart and burstEnd in italics, if that is the prevailing formatting style you're using.
There are more instances of such inconsistent formatting in the draft

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.8.2**   *P* **183**   *L* **41**   # i-189
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status*   **D**
The term "symbol" is used and abused across different functions without any formal
definition. As is, it just means "some amount of data" but it is not really clear what the
difference between symbol in PCS and in PMA is.

SuggestedRemedy
Please clarify the use of the word"symbol" in the draft, if needed creating definitions of
"symbol" within each function, if they are different. There are symbols in PCS, in PMA, at
PHY layer, etc.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.8.3**   *P* **184**   *L* **15**   # i-190
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
These are "up to" five channels, with one being mandatory and remaining 4 optional

SuggestedRemedy
Change "As five OFDM channels are accommodated" to "As up tp five OFDM channels are
accommodated"

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.8.3**   *P* **184**   *L* **19**   # i-191
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **D**
Untestable requirement: "The symbol mapping function therefore shall process all active
subcarriers
per symbol across all OFDM channels." - there is no measurement or reference point
allowing access to mapper function to confirm that it is indeed happening

SuggestedRemedy
Convert itno a statement. Remove PICS

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.3.8.3**   *P* **185**   *L* **6**   # i-192
Hajduczenia, Marek   Bright House Network

Comment Type   **ER**   *Comment Status*   **D**
There are multiple lists of steps in the draft. Some are numbered as the one startign in line
6. Some include explicit reference to "Step X" instead. Others use a combination of both
styles.

SuggestedRemedy
Please use one style for description of steps, prefereably the one page 185, line 6

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-192**   Page 35 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **00**   *SC* **101.4.3.8.4**   *P* **186**   *L* **6**   # i-193
Hajduczenia, Marek   Bright House Network

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

"downstream frame" - another one of ambiguous terms. The only definition I can find is in 101.4.3.5, and it is unclear, since it references symbols, which are not defined by themselves.

SuggestedRemedy

Please provide clear definition of "downstream frame" and "upstream frame". I would also suggest that these be renamed to "PHY frames" or soemthing similar, emphasizing the fact that we do not mean MAC frames by any chances

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.8.5**   *P* **186**   *L* **11**   # i-194
Hajduczenia, Marek   Bright House Network

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

Given that there is no state diagram to follow, what is the purpose of separating variables, constant, counters and functions in 101.4.3.8.5/6/7/8? They could be aggregated into a single subclause, at best left in 101.4.3.8.4 if they are really needed. This also avoid the problem of them being used to describe content of 101.4.3.8.4 and being at the same heading level :)

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.9.2**   *P* **186**   *L* **43**   # i-195
Hajduczenia, Marek   Bright House Network

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

We have a requirement to perform time interleaving and when it is done (lines 43/44) but no requirement that I can find to follow the specific methodology described in this draft

SuggestedRemedy

Please add a requirement to perform time interleaving per method described in this subclause. Add PICS.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.9.2**   *P* **187**   *L* **21**   # i-196
Hajduczenia, Marek   Bright House Network

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

Clearly untestable: The CLT shall support values of DS_TmIntrlv from 1 to 32 (see 101.4.3.9.5).

SuggestedRemedy

Convert into statement. Update PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.9.3**   *P* **187**   *L* **43**   # i-197
Hajduczenia, Marek   Bright House Network

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

We have a requirement to perform time interleaving and when it is done (lines 52/53) but no requirement that I can find to follow the specific methodology described in this draft

SuggestedRemedy

Please add a requirement to perform time interleaving per method described in this subclause. On pages 190/191 there are reference implementations for specific functions for frequency interleaver, which I would expect to be functionally normative, as we always do, ie., require the implementation produce the same result.
Add PICS.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.9.3**   *P* **189**   *L* **37**   # i-198
Hajduczenia, Marek   Bright House Network

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

Tiny little text

SuggestedRemedy

Please make sure text of inline equations meets the T,Text style font size requirements

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-198**   Page 36 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:27 PM
SORT ORDER: Comment ID

Cl **101**		*SC* **101.4.3.11**			*P* **193**		*L* **41**			# i-199
Hajduczenia, Marek						Bright House Network

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

Sounds like a requirement for CLT/CNU transmitter: These 3800 maximum active subcarriers shall
occupy the range 148 k 3947, where k is the spectral index of the subcarrier in Equation (101-25).

SuggestedRemedy

There is no DUTright now. Please rewrite and make it a requirement for CLT/CNU Tx (I guess)

Proposed Response			*Response Status* **O**

Cl **101**		*SC* **101.4.3.12**			*P* **195**		*L* **24**			# i-200
Hajduczenia, Marek						Bright House Network

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

Two separate requirements, one would be enough

SuggestedRemedy

Change to: "In the downstream direction, the CLT shall use one of the permissible values for DSNcp and DSNrp given in Table 101-10 and Table 101-11, respectively, selected such that DSNrp < DSNcp." Update PICS accordingly

Proposed Response			*Response Status* **O**

Cl **101**		*SC* **101.4.3.12**			*P* **195**		*L* **39**			# i-201
Hajduczenia, Marek						Bright House Network

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

Rather than add notes to Table 101-10/11, add "[OFDM Clock period (1/204.8 MHz)]" under DSNcp and DSNrp.

SuggestedRemedy

per comment

Proposed Response			*Response Status* **O**

Cl **101**		*SC* **101.4.3.12**			*P* **197**		*L* **1**			# i-202
Hajduczenia, Marek						Bright House Network

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

Given that we have apparently a separate subclause for upstream windowing, the note is not needed

SuggestedRemedy

Remove the note

Proposed Response			*Response Status* **O**

Cl **101**		*SC* **101.4.3.12.1**			*P* **198**		*L* **10**			# i-203
Hajduczenia, Marek						Bright House Network

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

Given the number of instances of OFDM Clock period term in the draft, would it make sense to define this as unit up front in each clause and not have to carry it onwards everywhere?

SuggestedRemedy

Per comment

Proposed Response			*Response Status* **O**

Cl **101**		*SC* **101.4.3.13**			*P* **198**		*L* **27**			# i-204
Hajduczenia, Marek						Bright House Network

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

These seem like downstream OFDM channel requirements, not just any requirements

SuggestedRemedy

Change "The 10GPASS-PX PHY shall comply" to "The 10GPASS-PX-D PHY shall comply" since we are placing requirements on Tx side only
Update PICS

Proposed Response			*Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general					*Comment ID* **i-204**		Page 37 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn					2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.4.2**   *P* **199**   *L* **29**   # i-205
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
"based on downstream tracking" - likely, "based on tracking downstream channel"

SuggestedRemedy
Per comment

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.2.1**   *P* **199**   *L* **40**   # i-206
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
Unnecessary separate requirements

SuggestedRemedy
Change to: "The CNU shall lock the frequency of the upstream Subcarrier Clock (50 kHz) and subcarrier frequency to the 10.24 MHz Master Clock derived from the downstream OFDM signal."
Update PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.3.1**   *P* **200**   *L* **21**   # i-207
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
Unnecessary requirement - it is not testable anyway: The upstream Superframe shall be composed of the Probe Period followed by 256 OFDMA symbols.

SuggestedRemedy
Change into informative text instead. Remove PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.3.1**   *P* **200**   *L* **21**   # i-208
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
what is the difference between "upstream frame" and "upstream superframe"? Both are used, with no clear definitions

SuggestedRemedy
Please clarify whether these are the same. In downstream, we only use "downstream frame"

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.3.2**   *P* **201**   *L* **35**   # i-209
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
No DUT. Rewrite to "The 10GPASS-XR-U shall start the transmission of the upstream (super)frame with ..."

SuggestedRemedy
Per comment. Update PICS
The same issue in 101.4.4.3.4

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.3.5**   *P* **202**   *L* **5**   # i-210
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**   *RBsize/len*
Unnecessarily circular definition. Rather than make TBsize a Boolean that points to specific RB size, just make it an unsigned integer which holds the size of RB. Then Rblen function is not needed at all and could be removed

SuggestedRemedy
Per comment

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-210**   Page 38 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.4.3.5**   *P* **202**   *L* **16**   # i-211
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
Odd statement: "This clear on read Boolean"

SuggestedRemedy
Change to "This variable" (type is already defined)
Add a statement at the end "This variable is cleared on read."

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.4.3.5**   *P* **202**   *L* **16**   # i-212
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**   *EZ*
No need to repeat variable type when it is explicitly defined using TYPE field: "This
Boolean variable ... "

SuggestedRemedy
Change all instances of "This Boolean variable" to "This variable" when TYPE field is
present explicitly and set to Boolean already

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.4.3.5**   *P* **202**   *L* **39**   # i-213
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
I assume both SYMcount and Rbmode variables donot need to be negative.

SuggestedRemedy
Change type to "unsigned integer"

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.4.3.6**   *P* **203**   *L* **17**   # i-214
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **D**   *EZ*
"SYMcount = SYMcount + 1" uses different font than rest of the SD

SuggestedRemedy
Align font use

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.4.3.6**   *P* **203**   *L* **1**   # i-215
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
We have ++ and -- operators defined

SuggestedRemedy
Change "SYMcount = SYMcount + 1" to "SYMcount ++"

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.4.3.6**   *P* **203**   *L* **28**   # i-216
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **D**
Unclear precedence in: "If (SYMcount - 6) mod RBmod = 1"

SuggestedRemedy
Change to "If ((SYMcount - 6) mod Rbmod) = 1"

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.4.4.4**   *P* **203**   *L* **46**   # i-217
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **D**
No DUT in "Subcarrier configuration in an EPoC OFDM channel of 192 MHz shall conform
... "

SuggestedRemedy
rewrite the requirement to include actual DUT (CLT/CNU). Update PICS

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-217**   Page 39 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101** *SC* **101.4.4.4.3** *P* **204** *L* **29** # i-218

Hajduczenia, Marek Bright House Network

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

Undefined DUT: "EPoC devices ... "

SuggestedRemedy

rewrite the requirement to include actual DUT (CLT/CNU). Update PICS

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.4.4.5.1** *P* **205** *L* **35** # i-219

Hajduczenia, Marek Bright House Network

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

Really inconsistent variable naming - in this subclause, it seems that the majority of the variables are all upper caps, which makes Figure 101-32 look just odd

SuggestedRemedy

Consider using some consistent naming scheme, at least within the draft.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.4.4.5.1** *P* **206** *L* **17** # i-220

Hajduczenia, Marek Bright House Network

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

Extra " after Boolean

SuggestedRemedy

Strike "

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.4.4.5.1** *P* **206** *L* **30** # i-221

Hajduczenia, Marek Bright House Network

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

The range of this variable implies it should be unsigned intereger

SuggestedRemedy

Per comment. Also, the grand majority of the variables defined in this subclause should be integers, since they are always positive. IRB is the only exception I can see, which needs to support negative values.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.4.4.5.3** *P* **211** *L* **44** # i-222

Hajduczenia, Marek Bright House Network

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

Can BITPOS be negative?

SuggestedRemedy

Change "BITPOS <=0" with "ELSE"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.4.4.5.4** *P* **212** *L* **5** # i-223

Hajduczenia, Marek Bright House Network

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

It seems like there should be a requirement about this somewhere: "The CLT ensures a minimum gap time between bursts ..." to make sure that the CLT receiver can operate correctly, but I could not locate such a requirement anywhere

SuggestedRemedy

Consider converting this statement into a requirement either in here, or adding a new one where the CLT transmitter is defined (likely in Clause 103, since that is what drives upstream scheduling)

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Comment ID* **i-223** Page 40 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn 2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.4.5.4**   *P* **212**   *L* **9**   # i-224
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status* **D**
Some odd strikethrough in the word "time_quantaum"

SuggestedRemedy
Remove "a" in this word. Also, remove italics from this word - it is not variable.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.6.1**   *P* **213**   *L* **51**   # i-225
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status* **D**   *EZ*
Seems like there is space missing between "TYPE:" and following variable definition

SuggestedRemedy
Scrub the draft, make sure there is space after "TYPE:" definition

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.7.1**   *P* **214**   *L* **15**   # i-226
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status* **D**   *EZ*
Incomplete variable formatting for "RB_Frame"

SuggestedRemedy
Make sure "R" is italicized

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.8.1**   *P* **214**   *L* **53**   # i-227
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status* **D**   *EZ*
Missing space between numeric value and units in "3dB"

SuggestedRemedy
Per comment

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.8.2**   *P* **215**   *L* **5**   # i-228
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status* **D**
It seems that both statements in lines 5 and 6 should be converted into requirements - I do not see any other requirements for burst marker structure anywhere

SuggestedRemedy
Per comment + add PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.9.1**   *P* **220**   *L* **25**   # i-229
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status* **D**
Is this externally observable: "The CNU shall normalize the newly calculated coefficients?

SuggestedRemedy
If so, leave it as is. If not, convert into a statement instead and remove associated PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.9.1**   *P* **220**   *L* **35**   # i-230
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status* **D**
This requirement seems more like a product spec than anything that we need for Tx/Rx definitions.

SuggestedRemedy
Convert into informative text instead and remove any associated PICS

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-230**   Page 41 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.4.9.2**   *P* **220**   *L* **41**   # i-231

Hajduczenia, Marek   Bright House Network

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

All testing modes and testign procedures should be moved to 101.4.6 which already
defines PMA testing

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.5**   *P* **223**   *L* **5**   # i-232

Hajduczenia, Marek   Bright House Network

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

no DUT in requirement: the output bit stream of
the scrambler shall be mapped to QAM symbols such that first bit is the least-significant bit
of the first QAM
subcarrier constellation m-tuple, see Figure 101-39

SuggestedRemedy

Please add DUT for this requirement and then update PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.5.3**   *P* **224**   *L* **20**   # i-233

Hajduczenia, Marek   Bright House Network

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

More tiny equations

SuggestedRemedy

Please fix equation size to match T,Text definition

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.5.4**   *P* **225**   *L* **4**   # i-234

Hajduczenia, Marek   Bright House Network

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

Incorrent multiplication operator

SuggestedRemedy

Please use "x" instead - multiple instances in draft

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.5.5**   *P* **227**   *L* **37**   # i-235

Hajduczenia, Marek   Bright House Network

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

No DUT in "Both real and imaginary axes of a QAM constellation shall be scaled..."

SuggestedRemedy

Please add DUT for this requirement and then update PICS

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.5.1**   *P* **228**   *L* **41**   # i-236

Hajduczenia, Marek   Bright House Network

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

Formatting mess

SuggestedRemedy

Change "In 13.1.4 of IEEE STD 802.1AS 2011 "Time synchronization in EPON"," to "In
IEEE Std 802.1AS, 13.1.4,"

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-236**   Page 42 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101** *SC* **101.5.1** *P* **228** *L* **54** *#* i-237

Hajduczenia, Marek Bright House Network

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

What is the purpose of T_CORR_CLT where all it does it replace DiffDelay/2?

SuggestedRemedy

Replace T_CORR_CLT with "DiffDelay/2". Remove T_CORR_CLT definition
Same for T_CORR_CNUi on page 229, line 16

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.5.1** *P* **229** *L* **1** *#* i-238

Hajduczenia, Marek Bright House Network

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

DiffDelay_CLT defined and not used.

SuggestedRemedy

Remove
Same for DiffDelay_CNUi on page 229, line 17

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.5** *P* **228** *L* **32** *#* i-239

Hajduczenia, Marek Bright House Network

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

It seems that the whole idea relies on measuring transmit and receive delay between MDI and MII interfaces, which are already supported by 802.3bf.

SuggestedRemedy

Instead of adding new variables to keep track of the delay through stack, suggest to:
1) add mandatory support for Clause 90 (Ethernet support for time synchronization protocols) and TSSI interface, which allows 802.1AS applications perform all neecessayr measurements and compensate for residency time in PCS/PMA
2) remove existing calculations in 101.5.1/2/3 - these are not necessary once you provide native access to residency time measurements in both receive and transmit directions
3) add support for registers: 1.1800 ... 1.1808 and 3.1800 ... 3.1808, which will give you measurement capability as well as Tx and Rx path delay measurements (min/max) which can be reported then between devices via PHY Link
Given that all register and interface work is done, this is the simplest mechanism to support 802.1AS without making purpose-built extensions into this PHY only

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.6.4.4** *P* **234** *L* **29** *#* i-240

Hajduczenia, Marek Bright House Network

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

Seems like font in this table is larger than in previous tables

SuggestedRemedy

Align font size
Same in 101.6.4.9

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.6.4.7** *P* **236** *L* **33** *#* i-241

Hajduczenia, Marek Bright House Network

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

Wrong "," placement in LDPC code designation

SuggestedRemedy

Is " ," and should be ", " - affects FE4 and FE5

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.6.4.10** *P* **238** *L* **28** *#* i-242

Hajduczenia, Marek Bright House Network

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

Unclear mathematical meaning: (Ck)^2

SuggestedRemedy

It is probably meant to be $(Ck)^2$

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-242**

Page 43 of 68
2/22/2016 1:48:28 PM

Cl **102**   *SC* **102**   *P* **239**   *L* **1**   # i-243

Hajduczenia, Marek   Bright House Network

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

All of the recent non-fiber based projects define their own Operations, Administration, and Maintenance (OAM) protocols, providing the function of what you call "PHY Link". Even GPOF does it in their own OAM specification. All of these OAMs are PHY specific, and are aptly called "1000BASE-T1 OAM", "1000BASE-H OAM", etc.

SuggestedRemedy

Rename "PHY Link" to "10GPASS-XR OAM", which is what this really is - it is an OAM link that allows for exchange of some data and provides for bidirectional low-level link between CLT and CNU
The proposed name does not conflict with Clause 57 OAM, and has been accepted by multiple projects consistently.

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.1**   *P* **239**   *L* **8**   # i-244

Hajduczenia, Marek   Bright House Network

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

There is no difference that I can see between "join" and "rejoin" - the registration process is still the same

SuggestedRemedy

Strike "or rejoin"

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.1**   *P* **239**   *L* **10**   # i-245

Hajduczenia, Marek   Bright House Network

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

"In a multi OFDM channel PHY only OFDM channel one has a PHY Link." - a pretty confusing statement, likely due to lack of commas

SuggestedRemedy

Change to "In a multi channel 10GPASS-XR PHY, only the first downstream and upstream OFDM channels have a PHY Link." - reference to architecture figures from Clause 101 might be welcome, to show where PHY Link is actually located

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.1**   *P* **239**   *L* **13**   # i-246

Hajduczenia, Marek   Bright House Network

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

And one more "frame" in this draft.

SuggestedRemedy

When referring to a frame in the context of a frame of PHY Link Channel, please use "PHY Link frame" consistently in Clause 102

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.1**   *P* **239**   *L* **17**   # i-247

Hajduczenia, Marek   Bright House Network

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

"Probe Period" or "Probing Period"

SuggestedRemedy

Pick one, use consistently

Proposed Response   *Response Status*   **O**

Cl **102**   *SC* **102.1.1**   *P* **240**   *L* **1**   # i-248

Hajduczenia, Marek   Bright House Network

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

Figure 102-1 is really composed of multiple figures, where you show downstream PHY Link frame and its elements. This should be broken into separate figures: 102-1 Downstream PHY Link frame, 102-2 EPFH field in Downstream PHY Link frame, etc.
Then change "The PHY Link frame is illustrated in Figure 102-1 and Figure 102-2." to "The structure of the downstream PHY Link frame is shown in Figure 102-1, followed by structure of individual fields in the downstream PHY Link frame shown in Figure 102-2 ..."
Apply similar changes to current Figure 102-2, to break down Upstream PHY Link frame into pieces.

SuggestedRemedy

Per comment - this will allow to reference specific figures later on, when fields are being described.

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-248**   Page 44 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**　　*SC* **102.1.1**　　　　　　　*P* **241**　　　　*L* **3**　　　　# i-249
Hajduczenia, Marek　　　　　　　　Bright House Network

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

This requirement should be more specific: "The
PHY Link frame shall be fixed; the downstream length is 128 OFDM symbols long and the upstream length
is 262 OFDM symbols long."

SuggestedRemedy

Change to "The downstream PHY Link frame shall be 128 OFDM symbols long. The upstream PHY Link frame shall be 262 OFDM symbols long."
Update PICS accordingly.
It might be also a better idea to rephrase these requirements to use CLT/CNU PHY Link instance as DUT

Proposed Response　　　*Response Status* **O**

Cl **102**　　*SC* **102.1.2**　　　　　　　*P* **241**　　　　*L* **40**　　　　# i-250
Hajduczenia, Marek　　　　　　　　Bright House Network

Comment Type **TR**　　*Comment Status* **D**　　　　　　　　*Fig 102-1/2*

It is not clear how Figure 102-3 and 102-4 fit with the layering model shown in Figures 101-1, where PHY link has a single interface (unnamed, undefined) to PMA IDFT , one interface to FRAME TIMING, one interface to SUBCARRIER etc.
To be consistent, Figures 102-3 and 102-4 should be demonstrated in the same layout, or have all interfaces defined and used consistently between clauses. Otherwise it is very hard to put these two together and understand what is really happening in here.

SuggestedRemedy

Per comment - my preference would be to specify individual interfaces between PHY Link and PMA/PMD and have them used in Clause 102 in Figure 102-3/4 consistently with rchitecture drawings from Clause 101

Proposed Response　　　*Response Status* **O**

Cl **102**　　*SC* **102.1.2**　　　　　　　*P* **241**　　　　*L* **19**　　　　# i-251
Hajduczenia, Marek　　　　　　　　Bright House Network

Comment Type **T**　　*Comment Status* **D**　　　　　　　　*Fig 102-1/2*

"EPoC Variables ariables"

SuggestedRemedy

Seems like repetition, unless there is some specific need for "ariables"
Also, there are some trimmed names like "SYM MAP", D'INTERLEAVER", PROBE RCV, which are not explained under the figure and one has to guess what they are intended to mean. Either expand them to full words, of it there is space missing - expand acronyms under the figures. This applies to Figure 102-3/4 alike

Proposed Response　　　*Response Status* **O**

Cl **102**　　*SC* **102.1.3**　　　　　　　*P* **242**　　　　*L* **32**　　　　# i-252
Hajduczenia, Marek　　　　　　　　Bright House Network

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

"passed over the PHY Link and all PHY to PHY signaling" - I do not think that 'all PHY to PHY signaling' is correct here - there are signals which end up in data path and not PHY path

SuggestedRemedy

Strike "and all PHY to PHY signaling"

Proposed Response　　　*Response Status* **O**

Cl **102**　　*SC* **102.1.3**　　　　　　　*P* **242**　　　　*L* **35**　　　　# i-253
Hajduczenia, Marek　　　　　　　　Bright House Network

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

What is the difference between "message block" and "signalling type" - they are mentioned in the same context, implying these are just fields in the PHY Link frame

SuggestedRemedy

Change "PHY to PHY signalling types" to "PHY message blocks" if that is what is intended here. Please make this change consistently in Clause 102 - there are many instances where creative terminology is made on the fly to mean "PHY Link message block"
Make sure all standalone "message block" instances are converted into "PHY Link message block" (e.g., PHY signalling types, PHY types (not meaning a PHY type), etc.)

Proposed Response　　　*Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general　　　　　　　*Comment ID* **i-253**　　Page 45 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn　　　2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**   *SC* **102.1.3**   *P* **242**   *L* **41**   # i-254

Hajduczenia, Marek   Bright House Network

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

MSB first is clear enough.

SuggestedRemedy

Strike ", as illustrated in Figure 102-5." and remove Figure 102-5

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.4.1.1**   *P* **243**   *L* **37**   # i-255

Hajduczenia, Marek   Bright House Network

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

Structure of Table 102-1 is different than Table 101-3 (as example)

SuggestedRemedy

Add the missing row and column designations.
The same applies to Table 102-2

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.4.2**   *P* **244**   *L* **18**   # i-256

Hajduczenia, Marek   Bright House Network

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

Style of Steps 1...3 and then Step 1 ...2 is not correct

SuggestedRemedy

Please apply proper numbered list style

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.4.2**   *P* **244**   *L* **16**   # i-257

Hajduczenia, Marek   Bright House Network

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

"Shortening encoder consists of 3 steps" - the encode does not consist of any steps

SuggestedRemedy

Change to "The operation of the shortening PHY Link encoder includes the following 3 steps:"
Similarly, in line 24, change to "The operation of the puncturing PHT Link encoder includes the following 2 steps:"

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.4.2**   *P* **244**   *L* **14**   # i-258

Hajduczenia, Marek   Bright House Network

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

The purpose of 102.1.4.2 is unclear.

SuggestedRemedy

Move text from lines 15 - 22 to 102.1.4.2.1
Move text from lines 24 - 28 to 102.1.4.2.2
Remove 102.1.4.2
Promote 102.1.4.2.1 and 102.1.4.2.2 one level up

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-258**   Page 46 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**   *SC* **102.1.4.2.1**   *P* **244**   *L* **35**   *#* i-259

Hajduczenia, Marek   Bright House Network

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

"The puncturing operation is as follows (also see Figure 102-6):" - it seems that a list should follow, but the text in lines 37 onwards is not formwatted as a list.

SuggestedRemedy

Consider either formatting text in lines 37 onwards as a bulleted list. Alternatively, merge this text together to build introduction descrition for LDPC (384, 288) puncturing encoder, to have text as follows:

The mother code is defined in 102.1.4.1.1. Denote the information bits sent to the mother code encoder by (a0, ... , a287), and let the encoding output be (a0, ... , a287, b288, ... , b479), where (b288, ... , b479) are parity-check bits. The coordinates to be deleted by the puncturing step are:
- Period 1: 48 consecutive coordinates a48, ... , a95
- Period 2: 48 consecutive coordinates b384, ... , b431
The puncturing operation is shown in Figure 102-6).

Similar changes need to be done in 102.1.4.2.2

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.5**   *P* **246**   *L* **25**   *#* i-260

Hajduczenia, Marek   Bright House Network

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

Wrong DUT - it says "The PHY shall scramble ...", while scrambler is likely in PHY Link block?

SuggestedRemedy

Fix the DUT for this requirement and update PICS.
Also, please align the structure of requirement to match 101.3.2.3, to include a requirement to produce the same result as serial implementation shown in Figure 102-XX, and also add initialization requirements (text right now has initialization as informative only)

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.5**   *P* **246**   *L* **37**   *#* i-261

Hajduczenia, Marek   Bright House Network

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

"The PHY does not scramble the PHY Link preamble" - this is important enough to be a requirememt

SuggestedRemedy

Convert to a requirement + add PICS

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.6**   *P* **246**   *L* **41**   *#* i-262

Hajduczenia, Marek   Bright House Network

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

Missing requirements for symbol map and constellation mapping:
- In the downstream direction the assigned modulation order is always 16-QAM
- The upstream PHY Link may use 16-QAM or a higher order

SuggestedRemedy

Convert both statements into requirements and add PICS

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.8**   *P* **247**   *L* **14**   *#* i-263

Hajduczenia, Marek   Bright House Network

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

Incorrect multiplication operator: *. Use "x" instead

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-263**   Page 47 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**　　*SC* **102.1.8**　　　　*P* **247**　　*L* **14**　　　# i-264
Hajduczenia, Marek　　　　　　Bright House Network

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

Consider rewriting the if statement using C pseudo code instead

SuggestedRemedy

Use:

If (RegAdd >= 1.1900 AND RegAdd <= 1.1999) then
<tab> Index = (RegAdd - 1.1900) x 1000
else If (RegAdd <= 12.0000) then
<tab> Index = (RegAdd - 12.0000) x 1000 + 1000
else
Index = 500 + XXX

Where XXX needs to be defined in Table 102-3

Proposed Response　　*Response Status* **O**

Cl **102**　　*SC* **102.1.8**　　　　*P* **247**　　*L* **18**　　　# i-265
Hajduczenia, Marek　　　　　　Bright House Network

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

Table 102-3 and Table 101-1 do not match and they have the same title: MDIO register to PHY variable mapping - I would expect them to match in terms of content

SuggestedRemedy

Consider merging both tables into a sigle one, located preferably in Clause 102, where PHY Link is defined.

Proposed Response　　*Response Status* **O**

Cl **102**　　*SC* **102.2.1.1**　　　　*P* **250**　　*L* **45**　　　# i-266
Hajduczenia, Marek　　　　　　Bright House Network

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

There is terminology confusion here: first we say Phy Link is allocated 400 Khz and then we say it is allowed 24 MHz of contiguous OFDM channel. I am not sure how both of these requirements can be met at the same time.

SuggestedRemedy

Change

During network setup the downstream PHY Link shall be allocated 400 kHz of spectrum. The allocated spectrum for the downstream PHY Link shall reside anywhere within a 24 MHz contiguous OFDM channel spectrum (i.e., 24 MHz with no internal exclusion bands) and have at least 3 MHz of contiguous spectrum above and below it for a total band of 6 MHz.

to

During network setup the downstream PHY Link is allocated 400 kHz of spectrum anywhere within a 24 MHz contiguous OFDM channel spectrum (i.e., 24 MHz with no internal exclusion bands) and have at least 3 MHz of contiguous spectrum above and below it for a total band of 6 MHz.

Remove existing PICS. Remove d1,d2,d3,d4 from Figure 102-8 unless they are needed somewhere (I could not locate any references to these in text today)
Add a requirement in 102.2.11 saying: The placement of the PHY Link within the contiguous OFDM channel shall be per Figure 102-8. Add a new PICS.

Proposed Response　　*Response Status* **O**

Cl **102**　　*SC* **102.2.1.2**　　　　*P* **251**　　*L* **34**　　　# i-267
Hajduczenia, Marek　　　　　　Bright House Network

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

This should be a requirement - this is the only subcarrier for downstream.

SuggestedRemedy

Convert into requirement + add PICS
There is no other requirement right now covering the modulation for downstream PHY Link

Proposed Response　　*Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general																						*Comment ID* **i-267**　　　Page 48 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn																						2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**   *SC* **102.2.3**   *P* **254**   *L* **42**   # i-268

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**   *EZ*
Wrong font for heading

SuggestedRemedy
Please reapply heading style to 102.2.3

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3**   *P* **254**   *L* **54**   # i-269

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**   *EZ*
"CRC(32)" ???

SuggestedRemedy
Change to "CRC32"
There are multiple instances in Clause 102
There are also instances of "CRC-32" and "CRC 32", which should be also converted to
"CRC32" for consistency

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3**   *P* **254**   *L* **52**   # i-270

Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
"CLTs shall use the appropriate message Type fields listed in Table 102-6 in each
message block" - seems like it should be a requirement for both CLT and CNU (they need
to understand these on both ends)

SuggestedRemedy
Change to "The CLT and CNU PHY link shall support message Type field values per Table
102-6."
Update PICS

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3.1**   *P* **255**   *L* **24**   # i-271

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**   *EZ*
RD_IF should be itialicised

SuggestedRemedy
Per comment

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3.1.1**   *P* **255**   *L* **30**   # i-272

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**   *EZ*
Comma not needed in "inform a CNU, to"

SuggestedRemedy
Per comment

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3.1.1**   *P* **255**   *L* **33**   # i-273

Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
This just reads wrong: "The CLT shall ensure that the inactive profile in all CNUs is
identical prior to making it the active profile."

SuggestedRemedy
Change to "The CLT shall set an identical inactive profile in all active CNU prior to its
activation."
Update PICS

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-273**   Page 49 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102** *SC* **102.2.3.1.1** *P* **255** *L* **34** # i-274
Hajduczenia, Marek Bright House Network

Comment Type **TR** *Comment Status* **D**
Very circular descriotion: "The CLT updates the unused profile then, using the PHY Configuration ID field, switches the CNU to the updated profile. Once the CLT begins the switchover, as indicated by Configuration ID field values 0b01 or 0b10 it shall complete the switchover. During a switchover the value of the Configuration ID field is either incremented or decremented by one in each successive frame; thus a switchover takes three PHY Link frame times."

SuggestedRemedy
Change to "The CLT updates the unused profile on connected CNUs by setting the PHY Configuration ID field to one of two values: 0b01 or 0b10. The CNU switches the target profile, incrementing or decrementing the PHY Configuration ID field value by one in each successive PHY Link frame. The profile switchover takes three PHY Link frame times." Update PICS

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.3.1.2** *P* **256** *L* **20** # i-275
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
C_ID is not defined. I assume it is "Configuration ID", but it is not shown anywhere

SuggestedRemedy
Add a note to figure 102-11 explaining what C_ID is

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.3.1.2** *P* **256** *L* **31** # i-276
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **D**
"The CLT shall ensure that all CNUs have sufficient time (as determined by the variable PhyLnkRspTm) to respond to the downstream PHY Link frame." - meaningless requirements, without specifying how much of time is needed.

SuggestedRemedy
Convert into informative text instead and remove any associated PICS

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.3.1.3** *P* **256** *L* **42** # i-277
Hajduczenia, Marek Bright House Network

Comment Type **TR** *Comment Status* **D**
What happened with values 0x8000 - 0xFFFF?

SuggestedRemedy
Add them to Table 102-8 and mark them as reserved (ignored on reception).

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.3.1.4** *P* **257** *L* **3** # i-278
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **D** *EZ*
More compound adjectives: "32 bit field"

SuggestedRemedy
Change to "32-bit field"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.3.1.4** *P* **257** *L* **6** # i-279
Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **D**
"its" versus "it's" -these are not the same

SuggestedRemedy
There are 7 instances of "it's in the draft and all of them wrong !

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Comment ID* **i-279** Page 50 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn 2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**   *SC* **102.2.3.2**   *P* **258**   *L* **2**   # i-280
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **D**
"within 2.5 ms" - what is the reference point for these 2.5 ms?

SuggestedRemedy
Please add information for reference point for this 2.5ms period: is it since data is received on PHY, processed, etc.?
The same applies to 102.2.5 "The CNU shall decode and be capable of acting on EPoC message block instructions included in a downstream PHY Link frame within 4.8 ms."

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3.2.1**   *P* **258**   *L* **15**   # i-281
Hajduczenia, Marek   Bright House Network

Comment Type **ER**   *Comment Status* **D**
What is "0x00b" ???? Is it hex or binary? It is also not clear what 1b, 15b, 2b etc. are. If these are intended to be bit sizes for individual fields, show the size as "1 bit" in the line below the field name

SuggestedRemedy
Per comment
The same applies to Figure 102-14/15

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.3.4**   *P* **260**   *L* **18**   # i-282
Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**
EMBcnt and EMBerr variables seem to be using smaller font than normal T,Text

SuggestedRemedy
Please apply proper style

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.4**   *P* **260**   *L* **36**   # i-283
Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **D**
binary size of the FEC code follows code name, usually

SuggestedRemedy
Change
a (384,288) binary punctured LDPC code
to
a binary punctured LDPC (384,288) code

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.2.7.5**   *P* **265**   *L* **12**   # i-284
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **D**
What is this statement intended to mean: "EPFHtp | DS_CID | US_CID | RF_ID | 0b0 | PhyDA| LocalTS" - the "|" operator is not defined right now

SuggestedRemedy
If it is supposed to be a binary summation, then use "|" with no surrounding spaces

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.144b**   *P* **28**   *L* **33**   # i-285
Rolfe, Benjamin   Blind Creek Associate

Comment Type **TR**   *Comment Status* **D**
the term is used in it's own definition. This is not allowed in an IEEE standard.

SuggestedRemedy
Delete second sentence

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-285**   Page 51 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **1**   *SC* **1.4.144c**   *P* **28**   *L* **37**   # i-286
Rolfe, Benjamin   Blind Creek Associate

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

Term is used in the definition. This is not allowed in an IEEE Standard (see IEEE Standard Style Manual)

SuggestedRemedy

Delete everything after first period.

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.170a**   *P* **28**   *L* **42**   # i-287
Rolfe, Benjamin   Blind Creek Associate

Comment Type **TR**   *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 prior to applying windowing." is a normative characteristic of the cyclic prefix, and does not belong in the definition of the term cyclic prefix.

SuggestedRemedy

Remove from definition, and move to appropriate normative clause.

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.277a**   *P* **28**   *L* **47**   # i-288
Rolfe, Benjamin   Blind Creek Associate

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

"In effect, MER is a measure of how spread out the symbol points in a constellation are. More specifically, MER is a measure of the cluster variance that exists in a transmitted or received waveform at the output of an ideal receive matched filter. MER includes the effects of all discrete spurious, noise, carrier leakage, clock lines, synthesizer products, linear and nonlinear distortions, other undesired transmitter and receiver products, ingress, and similar in-channel impairments." may well be useful to know, but is WAY more than is appropriate in the definition of the term. This appears a mix of normative and informative text, which is better suited to a normative clause(s) and general informative overview, respectively.

SuggestedRemedy

Remove extra informative and normative text from the definition and move it to an appropriate place in the standard.

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.306a**   *P* **29**   *L* **10**   # i-289
Rolfe, Benjamin   Blind Creek Associate

Comment Type **TR**   *Comment Status* **D**   *OFDM def*

"Thus individual QAM subcarriers carry a small percentage of the total payload at a low data rate." is an interesting and informative bit of additional information, but not part of the definition of the term.   This text belongs in an overview discussion of OFDM.

SuggestedRemedy

Remove the interesting and informative extra text from the definition and move to an overview clause where it will be both interesting have useful context for the user of the standard.

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.4.345b**   *P* **29**   *L* **27**   # i-290
Rolfe, Benjamin   Blind Creek Associate

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

This text is explaining a notation for describing normative requirement (format) of certain MDIO registers, It is not a "term" and so this definition does not belong in this clause. A better place might be clause 45. Or in a clause in the standard titled "notation conventions".

SuggestedRemedy

Delete the definition.   Add text in clause 45 to explain the notation as used in defining MDIO registers.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.2**   *P* **98**   *L* **49**   # i-291
Rolfe, Benjamin   Blind Creek Associate

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

What is "lowest power"? Without defining what this means, the requirement is unverifiable and thus invalid. Is this meant to be the lowest power supported by an implementation? I do not find a specific level or other clue as to what is meant by "lowest power" other than that it may, or may not, be up to 9dB bellow P1.6Min.

SuggestedRemedy

Restate requirement clearly and in a way which may be verified.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-291**   Page 52 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.5.6**   *P* **107**   *L* **48**   # i-292
Rolfe, Benjamin   Blind Creek Associate

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

"shall" in table is unnecessary and contradicts text. The sentence "The CNU shall output an RF Modulated signal with characteristics delineated in Table 100-11" makes the table "requirements"; "shall be capable of" is not the same as "shall output" so this is contradicting the normative text above; "CNU shall be capable of transmitting a total average output
power." is not an compete (sensible) requirement, but for example "be capable of transmitting a total average output power of 65 dBmV" would be both complete and completely sensible. It would appear either this text is misplaced, or otherwise mangled in editing?

SuggestedRemedy

Clarify the requirement. Suggest that if there is in fact a power range intended, specify the minimum and maximum power that shall be used at any given time.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.5.3**   *P* **120**   *L* **23**   # i-293
Rolfe, Benjamin   Blind Creek Associate

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

"Normative specifications in this clause shall be met by a system integrating 10GPASS-XR over the life of the product while the product operates within the manufacturer's range of environmental, power, and other
specifications."
How would one verify that this requirement has been met by a conforming product? It would require testing the entire life of the product, which is only possible if the product is designed to end it's life at the completion of conformance testing. If that is the intention clearly state the self-destruct requirement (although this seems to limit severely the utility of the product).

SuggestedRemedy

(1) delete the paragraph,
or
(2) change "shall" to "should be designed to"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.7**   *P* **121**   *L* **5**   # i-294
Rolfe, Benjamin   Blind Creek Associate

Comment Type **GR**   *Comment Status* **D**

"The supplier of a protocol implementation that is claimed to conform to Clause 100, Physical Medium
Dependent (PMD) sublayer and medium for passive optical networks type 10GPASS-XR shall complete the
following protocol implementation conformance statement (PICS) proforma." is stating a required behavior of the USER of the standard (implementer), which is out of scope of this standard.

SuggestedRemedy

Change "shall" to "will".

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.6.1**   *P* **231**   *L* **7**   # i-295
Rolfe, Benjamin   Blind Creek Associate

Comment Type **GR**   *Comment Status* **D**

The statement "The supplier of a protocol implementation that is claimed to conform to Clause 101, Reconciliation Sublayer, Physical Coding Sublayer, and Physical Media Attachment for EPoC, shall complete the following protocol implementation conformance statement (PICS) proforma." is specifying a required behavior of the user (implementer) of a standard, which is out of scope of this standard.

SuggestedRemedy

Change "shall" to "will".   Or delete the paragraph. Or change the scope of the standard to include human behavior.

Proposed Response   *Response Status* **O**

Cl **102**   *SC* **102.1.1**   *P* **241**   *L* **3**   # i-296
Rolfe, Benjamin   Blind Creek Associate

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

"The PHY Link frame shall be fixed;" is missing the word "length" and the ";" should be a ":"? (assuming you meant "not variable" rather than "not broken").

SuggestedRemedy

change to "The PHY Link frame length shall be fixed:"

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-296**   Page 53 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **102**　　*SC* **102.2.3.1.3**　　　　*P* **256**　　　*L* **39**　　　　# i-297

Rolfe, Benjamin　　　　　　　　　Blind Creek Associate

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

"The CLT shall only transmit the valid values of the PHY DA as given in Table 102-8."
contradicts normative statements elsewhere in the draft which specify other things
transmitted by the CLT. I might guess that what is intended is to specify that the PHY DA
field of transmitted frames shall contain a valid value from table 102-8.

SuggestedRemedy

Change to "The PHY DA field shall contain one of the valid values given in table 102-2"

Proposed Response　　　*Response Status* **O**

Cl **102**　　*SC* **102.5.1**　　　　*P* **291**　　　*L* **5**　　　　# i-298

Rolfe, Benjamin　　　　　　　　　Blind Creek Associate

Comment Type **GR**　　*Comment Status* **D**

"The supplier of a protocol implementation that is claimed to conform to Clause 102, EPoC
PHY Link, shall complete the following protocol implementation conformance statement
(PICS) proforma." is specifying a required behavior or the implementer of the standard (a
human being), which is out of scope of this standard (which defines behaviors of
conforming devices).

SuggestedRemedy

Change "shall" to "will"

Proposed Response　　　*Response Status* **O**

Cl **103**　　*SC* **103.4.1**　　　　*P* **341**　　　*L* **6**　　　　# i-299

Rolfe, Benjamin　　　　　　　　　Blind Creek Associate

Comment Type **GR**　　*Comment Status* **D**

"The supplier of a protocol implementation that is claimed to conform to Clause 103,
Multipoint MACControl for EPoC, shall complete the following protocol implementation
conformance statement (PICS)proforma." is (again) specifying required behavior of a
person or entity who's behavior is out of scope of this standard (and thus out of scope of
the project)

SuggestedRemedy

Withdraw the draft as the content exceeds the scope of the PAR.
or
change "shall" to "will".

Proposed Response　　　*Response Status* **O**

Cl **100A**　　*SC* **100A.4.1**　　　　*P* **355**　　　*L* **6**　　　　# i-300

Rolfe, Benjamin　　　　　　　　　Blind Creek Associate

Comment Type **GR**　　*Comment Status* **D**

"The supplier of a protocol implementation that is claimed to conform to Annex 100A,
EPoC OFDM channel model, shall complete the following protocol implementation
conformance statement (PICS) proforma." specifies requirements outside the scope of
this standard (e.g. behavior of the supplier). Either the draft exceeds the scope of the
PAR, or we are stating a FACT, not a requirement (in the context of the standard). I prefer
the second option ;-)

SuggestedRemedy

Change "shall" to "will"

Proposed Response　　　*Response Status* **O**

Cl **1**　　*SC* **1.4.306a**　　　　*P* **29**　　　*L* **10**　　　　# i-301

Rolfe, Benjamin　　　　　　　　　Blind Creek Associate

Comment Type **TR**　　*Comment Status* **D**　　　　　　　　*OFDM def*

This definition contradicts the NORMATIVE definition of OFDM Channel used in for
example Table 45-98a which states the OFDM Channel includes pilots, which are
modulated using BPSK, and 101.4.3.4.3 where it states When a subcarrier is used to carry
MAC data it uses the modulation type of QPSK or 2n-QAM. Thus "over a number of
orthogonal QAM subcarriers." is incorrect.

SuggestedRemedy

Remove the definition from this clause.

Proposed Response　　　*Response Status* **O**

Cl **100**　　*SC* **100.3.4.2**　　　　*P* **92**　　　*L* **22**　　　　# i-302

Nakada, Juichi　　　　　　　　　ADVANTEST

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

Table 100-3 CLT RF output requirements
p.92, line 22, "Phase noise up to of the subcarrier's center".
I think that numerical value is insufficient in this sentence.

SuggestedRemedy

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-302**　　　Page 54 of 68
2/22/2016 1:48:28 PM

Cl **103** *SC* **103.2.2.3** *P* **308** *L* **54** # i-303
Remein, Duane   Futurewei Technologie

Comment Type **E** *Comment Status* **D**
Phrasing of variables used by reference should place emphasis on reference not defintion.

SuggestedRemedy
See changes to definition in 3bn_remein_02_0216.pdf for the following variable/counters/functions and constants: localTime, data_rx, data_tx, grantStart, IdleGapCount, initial_derating_delay, newRTT, m_sdu_rx, m_sdu_tx, m_sdu_ctl, OctetsRequired, opcode_rx, opcode_tx, packet_initiate_delay, RTT, stopTime, timestamp, timestampDrift, tqOffset, transmitAllowed, transmitEnable, transmitEnable, transmitPending, Opcode-specific function(opcode), select(), SelectFrame(), sizeof(sdu), transmissionPending(), grantEndTime, insideDiscoveryWindow, pendingGrants, registered, syncTime, discovery_window_size_timer, mpcp_timer, max_future_grant_time, min_processing_time, currentGrant, gate_timeout, grantList, maxDelay, nextGrant, nextStopTime, empty(list), InsertInOrder(sorted_list, inserted_element), IsBroadcast(grant), PeekHead(sorted_list), Random(r), RemoveHead(sorted_list), gntWinTmr, and gate_periodic_timer.

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.1.3** *P* **304** *L* **1** # i-304
Remein, Duane   Futurewei Technologie

Comment Type **E** *Comment Status* **D**
This section is essentially a duplicate of 77.1.4 and can be removed.

SuggestedRemedy
Replace the para with "See 77.1.4"

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2** *P* **305** *L* **9** # i-305
Remein, Duane   Futurewei Technologie

Comment Type **E** *Comment Status* **D**
Figure 103-4 is a duplicate of 77-6.

SuggestedRemedy
Replace the figure 103-4 with "See Figure 77-6 for a high level diagram of the multipoint transmission control service interfaces."

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2** *P* **305** *L* **21** # i-306
Remein, Duane   Futurewei Technologie

Comment Type **E** *Comment Status* **D**
Figure 103-5 is a duplicate of 77-7.

SuggestedRemedy
Replace the figure 103-5 with "See Figure 77-7 for a high level diagram of the control parser service interfaces."

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2** *P* **306** *L* **1** # i-307
Remein, Duane   Futurewei Technologie

Comment Type **E** *Comment Status* **D**
Figure 103-6 is a near duplicate of 77-8.

SuggestedRemedy
Replace the figure 103-6 with "See Figure 77-8 for a high level diagram of the CLT control multiplexer service interfaces (CLT operates the same as an OLT)."

Proposed Response *Response Status* **O**

Cl **103** *SC* **103.2.2** *P* **306** *L* **1** # i-308
Remein, Duane   Futurewei Technologie

Comment Type **E** *Comment Status* **D**
Figure 103-7 is a near duplicate of 77-9.

SuggestedRemedy
Replace the figure 103-7 with "See Figure 77-9 for a high level diagram of the CNU control multiplexer service interfaces (CNU operates the same as an ONU)."

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 U/unsatisfied Z/withdrawn
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Comment ID **i-308**   Page 55 of 68
2/22/2016 1:48:28 PM

Cl **103**   *SC* **103.2.2.5**   *P* **312**   *L* **13**   # i-309
Remein, Duane   Futurewei Technologie

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

The definition of counter packet_initiate_timerC refers back to Cl 64 but it is unique to EPoC and should be a standalone definition.
Also there are two instances of "packet_initiate_timer_done" (Fig 103-12 & 103-13) which are incorrect.

SuggestedRemedy

Change the definition to "This timer is used to delay frame transmission from MAC Control to avoid variable MAC delay while MAC enforces IPG after a previous frame. In addition, this timer increases interframe spacing just enough to accommodate the extra parity data to be added by the FEC encoder."
Change the two instances of "packet_initiate_timer_done" to "packet_initiate_timerC_done"

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.2.2.3**   *P* **308**   *L* **54**   # i-310
Remein, Duane   Futurewei Technologie

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

Many cross references to Cl 64 can be changed to Cl 77 without creating a double reference.

SuggestedRemedy

See reference changes in 3bn_remein_02_0216.pdf.

Proposed Response   *Response Status*   **O**

Cl **103**   *SC* **103.2.1**   *P* **304**   *L* **49**   # i-311
Remein, Duane   Futurewei Technologie

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

Verb tense incorrect

SuggestedRemedy

Change "is" to "are" so the sentence reads "The principles of Multipoint MAC Control are the same as those described in 77.2.1 for EPON." This change is included in 3bn_remein_02_0216.pdf.

Proposed Response   *Response Status*   **O**

Cl **100**   *SC* **100.2.1.1**   *P* **84**   *L* **13**   # i-312
Remein, Duane   Futurewei Technologie

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

The definition of time_quantum is located in 64.2.2.1 not 77.2.2.1 (which references 64.2.2.1).

SuggestedRemedy

Change the reference from 77.2.2.1 to 64.2.2.1 so as to avoid a double reference.

Proposed Response   *Response Status*   **O**

Cl **101**   *SC* **101.1.2**   *P* **127**   *L* **33**   # i-313
Remein, Duane   Futurewei Technologie

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

The definition of time_quantum is located in 64.2.2.1 not 77.2.2.1 (which references 64.2.2.1).

SuggestedRemedy

Change the reference from 77.2.2.1 to 64.2.2.1 so as to avoid a double reference.

Proposed Response   *Response Status*   **O**

Cl **FM**   *SC* **FM**   *P* **1**   *L* **30**   # i-314
Remein, Duane   Futurewei Technologie

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

Change "IEEE P802.3bn initial Sponsor ballot"

SuggestedRemedy

to "IEEE P802.3bn Sponsor ballot recirculation"

Proposed Response   *Response Status*   **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-314**   Page 56 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **45**	*SC* **45.2.1.3**	*P* **36**	*L* **27**	# i-315

Remein, Duane   Futurewei Technologie

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

"1.1958 through 1.1959" should be "1.1958 and 1.1959"

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **45**	*SC* **45.2.1.131**	*P* **39**	*L* **3**	# i-316

Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**   *Cl45 renum*

Error in Editing Instruction: "Insert 45.2.1.131 through 45.2.1.165" should be "Insert 45.2.1.131 through 45.2.1.167"

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **45**	*SC* **45.2.1.131.1**	*P* **39**	*L* **50**	# i-317

Remein, Duane   Futurewei Technologie

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

Missing word "variable" between "TimeSyncCapable defined"

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **45**	*SC* **45.2.1.131.8**	*P* **40**	*L* **44**	# i-318

Remein, Duane   Futurewei Technologie

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

missing period after "102.2.7.3"

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **45**	*SC* **45.2.1.132.2**	*P* **41**	*L* **31**	# i-319

Remein, Duane   Futurewei Technologie

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

Missing word "counter between "the DS_ChCnt"

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **45**	*SC* **45.2.1.160**	*P* **55**	*L* **21**	# i-320

Remein, Duane   Futurewei Technologie

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

Missing word "variable" between "the PhyLinkRspTm"

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **45**	*SC* **45.2.1.161.1**	*P* **56**	*L* **3**	# i-321

Remein, Duane   Futurewei Technologie

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

The text indicates a 2 bit value maps to 1 bit variable. Also an incorrect reference to 101.4.3.4.5.

SuggestedRemedy

Change
"These bits are a reflection of bit 1 of variable US_ModAbility defined in 101.4.3.4.5." to
"These bits are a reflection of the variable US_ModAbility defined in 101.4.4.4.4."

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-321**   Page 57 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.4.4.4**   *P* **204**   *L* **36**   # i-322
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**
    Definition indicates a 4-bit binary field but only 2 bits are defined.

SuggestedRemedy
    Change "4-bit binary" to 2-bit binary"

Proposed Response   *Response Status* **Z**
    PROPOSED REJECT.

    This comment was WITHDRAWN by the commenter.

Cl **45**   *SC* **45.2.1.161.3**   *P* **56**   *L* **16**   # i-323
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**
    Incorrect reference to US_ModAbility

SuggestedRemedy
    Change to DS_ModAbility. (ensure variable name is none-breaking (Esc-n-s)

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.163.1**   *P* **57**   *L* **16**   # i-324
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
    Incorrect reference to 102.4.1.9.2.
    Same issue for 45.2.1.163.2 line 22

SuggestedRemedy
    Change to 102.4.1.8.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.166.1**   *P* **59**   *L* **20**   # i-325
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
    "indicated" shold be "indicates"

SuggestedRemedy
    per comment.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.166.1**   *P* **59**   *L* **23**   # i-326
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
    Incorrect ref to 100.4.3.
    Same issue line 30.

SuggestedRemedy
    Change to 100.4.3.1.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.167.1**   *P* **60**   *L* **4**   # i-327
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
    Variable name ReportedPwr should be italics. Reference should be 100.3.5.3.1.

SuggestedRemedy
    per comment.

Proposed Response   *Response Status* **O**

Cl **56**   *SC* **56.1.2.1**   *P* **69**   *L* **53**   # i-328
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
    ODN is already spelled out and doe not need to be done again here

SuggestedRemedy
    Change "optical distribution network (ODN)" to "ODN" with underlineing.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-328**   Page 58 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **56** *SC* **56.1.3** *P* **72** *L* **1** # i-329

Remein, Duane Futurewei Technologie

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

The editing instruction should refer to Table 56-1 not 56-2.

SuggestedRemedy

Change "Insert two rows at the end of Table 56-2, ..." to "Insert two rows at the end of Table 56-1, ..."

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.1** *P* **75** *L* **10** # i-330

Remein, Duane Futurewei Technologie

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

It appears that the basis for Table 67-1 was taken from 2012 edition and not the latest revision.

SuggestedRemedy

Change the editing instruction to read: "Insert two new rows at the end of Table 67-1 and two new footnotes labeled d and e as shown below (unchanged rows and footnotes not shown)".
Remove the unchanged rows and footnotes from the table.

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.1.1** *P* **84** *L* **13** # i-331

Remein, Duane Futurewei Technologie

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

77.2.2.1 only points to 64.2.2.1. rather than create a double reference for the reader point directly to 64.2.2.1. Could also point to 103.2.2.1 for a "sectional local" reference.

SuggestedRemedy

Change 77.2.2.1 to 64.2.2.1.

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.7.3.1** *P* **123** *L* **19** # i-332

Remein, Duane Futurewei Technologie

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

Everywhere else in the draft "I/Q" is "I / Q" (with spaces).

SuggestedRemedy

Change "I/Q" to "I / Q" in 2 places (line 19 & 22).

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.4** *P* **85** *L* **20** # i-333

Remein, Duane Futurewei Technologie

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

This statement is not strictly true:
"CLT PMD data transmission is always enabled."
When PD_Enable is FALSE the CLT is not allowed to transmit onto the media. This prevents a partially configured CLT from interferiing with existing services (see Figure 102-16)
Task Force may wish to adjust the wording in 102.2.7.3 also (see comment against pg 152 Cl 101.3.2.5.6 Line 27)

SuggestedRemedy

Change to read: "CLT PMD data transmission is always enabled except when PD_Enable is FALSE (see 102.2.7.3)."

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.2.1** *P* **88** *L* **6** # i-334

Remein, Duane Futurewei Technologie

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

This statement disagree with the definition of in 100.3.2.3
"... sets DS_RateMatchFail to "1" indicating mismatch, otherwise "0"."
Same issue for US_RateMatchFail in 100.3.2.2

SuggestedRemedy

Change to read "... sets DS_RateMatchFail to TRUE indicating mismatch, otherwise it is set to FALSE." and "... sets US_RateMatchFail to TRUE indicating mismatch, otherwise it is set to FALSE."

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Comment ID* **i-334** Page 59 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn 2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **100**   *SC* **100.3.3**   *P* **88**   *L* **37**   # i-335
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
Spelling "labelled"

SuggestedRemedy
"labeled"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.4.1**   *P* **89**   *L* **26**   # i-336
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
The "N" in "Neq" is not italicised: "The number of equivalent 6 MHz channels, Neq, is ..."

SuggestedRemedy
per comment.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.2**   *P* **98**   *L* **24**   # i-337
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
"P1.6" should be italicised. Same issue:
pg 98 ln 27 "Pmax"
pg 98 ln 52 "P1.6t"

SuggestedRemedy
per comment.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.2**   *P* **102**   *L* **22**   # i-338
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
In Eq 100-16 the term "Under-grant Hold #Users" appears as "Under-grant Hold # Users" with a space between "#" and "Users"

SuggestedRemedy
remove the excess space.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.2**   *P* **102**   *L* **32**   # i-339
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**
The term "Under-grant Hold Number of Users" in Eq 100-17 is undefined.

SuggestedRemedy
Define the term (could this be "Under-grant Hold #Users"?)

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.3**   *P* **104**   *L* **3**   # i-340
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**
It is not clear what "Modulated Subcarriers" refers to here and on lines 10 and 18. Is this the bandwidth of the modulated carriers (presumably or the units don't work)? The number of the modulated carriers (in which case you should use NS_Max as in Eq 100-11) mentioned earlier in the sentence or something else?
Also on line 10 there is a spurious emission of the word "The".

SuggestedRemedy
Clarify what is meant here and on lines 10 & 18 (possible using "(NS_Max X 0.05)" <subscript>S_Max). Use Italics as appropriate and remove the spurious "The" on line 10.

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 U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

Comment ID **i-340**   Page 60 of 68
2/22/2016 1:48:28 PM

Cl **100**   *SC* **100.3.5.4.4**   *P* **105**   *L* **37**   # i-341
Remein, Duane   Futurewei Technologie

Comment Type   **T**   *Comment Status* **D**
    To what voltage step does this refer "The CNU's voltage step shall be dissipated ..."?
    Presumably that at the MDI

SuggestedRemedy
    Change to read "The CNU's voltage step at the MDI shall be dissipated ..."

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.4.4**   *P* **105**   *L* **40**   # i-342
Remein, Duane   Futurewei Technologie

Comment Type   **TR**   *Comment Status* **D**
    What is a "backed-off transmit level"? This term is not used anywhere in the draft. "Back-
    off" is only used to refer to the Discovery back-off algorithm.

SuggestedRemedy
    Clarify the term.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.5.1**   *P* **106**   *L* **14**   # i-343
Remein, Duane   Futurewei Technologie

Comment Type   **E**   *Comment Status* **D**
    Hopefully this is true "carrier phase offset, and timing will be adjusted" but we typically don't
    use the work "will"

SuggestedRemedy
    Change to "carrier phase offset, and timing are adjusted"

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.5.1**   *P* **106**   *L* **37**   # i-344
Remein, Duane   Futurewei Technologie

Comment Type   **E**   *Comment Status* **D**
    "BURSTMER" should be italicised.

SuggestedRemedy
    per comment.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.7**   *P* **108**   *L* **19**   # i-345
Remein, Duane   Futurewei Technologie

Comment Type   **E**   *Comment Status* **D**
    Add missing period between "Figure 100-3" and "PMD_SIGNAL.request(ON)"

SuggestedRemedy
    per comment.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.7.1**   *P* **112**   *L* **27**   # i-346
Remein, Duane   Futurewei Technologie

Comment Type   **E**   *Comment Status* **D**
    Excessive white space in row starting "OFDM channel input level range" (probably due to
    para mark rather then linefeed).

SuggestedRemedy
    Remove excess white space.

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.8**   *P* **115**   *L* **33**   # i-347
Remein, Duane   Futurewei Technologie

Comment Type   **E**   *Comment Status* **D**
    Unwarrented period between "subclause" and "Definitions"

SuggestedRemedy
    Remove period, insert missing space, and change ""Definitions" to "definitions"

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-347**   Page 61 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **100**		*SC* **100.3.8**				*P* **115**			*L* **32**			# i-348

Remein, Duane								Futurewei Technologie

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

The phrase "The CLT ensures that" implies a requirement on the CLT which cannot currently be met as there is no way to ensure the configuration meets these objectives (e.g., a "NACK" capability in MDIO). These implied requirements can easily be provided by a system which includes the PHY but should not be implied requirements of the PHY. See comment against pg 193 line 39 Cl 101.4.3.11.

SuggestedRemedy

Remove the phrase at line 32.
Remove the phrase at line 38 and change "does not" to "cannot" so the sentence reads: "The encompassed spectrum of each 192 MHz downstream OFDM channel cannot exceed 190 MHz and does not exceed 3800 active subcarriers (see Table 100-3)."
Remove the phrase at line 42.
Remove the phrase at pg 116 line 24 and change "does not" to "cannot" 2x so the sentence reads: "the encompassed spectrum of the upstream OFDMA channel cannot exceed 190 MHz and cannot exceed 3800 active subcarriers (see Table 100-11)."

Proposed Response		*Response Status*	**O**

Cl **101**		*SC* **101.4.3.11**				*P* **193**			*L* **39**			# i-349

Remein, Duane								Futurewei Technologie

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

The phrase "The CLT ensures that" implies a requirement on the CLT which cannot currently be met as there is no way to ensure the configuration meets these objectives (e.g., a "NACK" capability in MDIO). These implied requirements can easily be provided by a system which includes the PHY but should not be implied requirements of the PHY. See comment against pg 115 line 32 Cl 100.3.8.

SuggestedRemedy

Remove the phrase, change "does not" to "cannot" and close parenthesis so the sentence reads: "The encompassed spectrum of a 192 MHz OFDM channel cannot exceed 190 MHz (3800 active subcarriers, see Table 100-3 and Table 100-11)."

Proposed Response		*Response Status*	**O**

Cl **100**		*SC* **100.4.1**				*P* **116**			*L* **45**			# i-350

Remein, Duane								Futurewei Technologie

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

To which specified limit does this statement apply? "The specified limit applies"

SuggestedRemedy

Clarify statement.

Proposed Response		*Response Status*	**O**

Cl **100**		*SC* **100.4.4**				*P* **119**			*L* **25**			# i-351

Remein, Duane								Futurewei Technologie

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

In "The OFDM test receiver need to be functionally" "need" should be "needs"

SuggestedRemedy

per comment.

Proposed Response		*Response Status*	**O**

Cl **100**		*SC* **100.3.2.1**				*P* **87**			*L* **5**			# i-352

Remein, Duane								Futurewei Technologie

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

"DS_Frame_Data_Load has the same value every frame, ..." My recollection is that this should be for every superframe not every frame.

SuggestedRemedy

Change "frame to superframe"

Proposed Response		*Response Status*	**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general						*Comment ID* **i-352**		Page 62 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn						2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.1.1**   *P* **127**   *L* **19**   # i-353

Remein, Duane   Futurewei Technologie

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

The notations "- =", and "+ =" do not appear elsewhere in the draft and these descriptions could be removed.

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.1.4**   *P* **132**   *L* **22**   # i-354

Remein, Duane   Futurewei Technologie

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

In Fig 101-1 & 101-2 the "Clause 102" in the Phy Link block should be made a live link.

SuggestedRemedy

per comment.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.3.2.5.6**   *P* **152**   *L* **27**   # i-355

Remein, Duane   Futurewei Technologie

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

This statement is not strictly true: "At the CLT, this variable is always set to TRUE."
When PD_Enable is FALSE the CLT is not allowed to transmit onto the media. This prevents a partially configured CLT from interferiing with existing services (see Figure 10)
Task Force may wish to adjust the wording in 100.2.4 also (see comment against pg 85 Cl 100.2.4 line 20)

SuggestedRemedy

Change to read: "At the CLT, this variable is always set to TRUE except when PD_Enable is FALSE (see 102.2.7.3)."

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.3**   *P* **173**   *L* **41**   # i-356

Remein, Duane   Futurewei Technologie

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

"con-
nect-or"

SuggestedRemedy

Remove excess dash

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.6.4**   *P* **180**   *L* **8**   # i-357

Remein, Duane   Futurewei Technologie

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

This requirement cannot be enforced by the PHY as continuous pilots are provissioned.
"The CLT shall place continuous pilots ..."

SuggestedRemedy

Change statement to "The CLT should place continuous pilots ..."
Change statement for Step 8 (line 33) from
"The CLT transmits this continuous pilot" to
"The CLT shall transmit this continuous pilot"
Change PICS PI3 from
"Continuous Pilot placement/Meets the Equation (101-9) and the eight steps given in 101.4.3.6.4" to
""Continuous Pilot transmittion/ The CLT transmits the continuous pilot pattern and communicates their placement to CNUs"
Another alternative

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.3.12**   *P* **198**   *L* **23**   # i-358

Remein, Duane   Futurewei Technologie

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

Missing space "0 1 0="

SuggestedRemedy

Change to "0 1 0 ="

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-358**   Page 63 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101**   *SC* **101.4.4.3.5**   *P* **202**   *L* **12**   # i-359
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**   *Rbsize/len*
Per the definiiton of RBsize it has values of TRUE & FALSE to the following statement
cannot be correct "Value: 8 when RBsize is 0, 16 when RBsize is 1."

SuggestedRemedy
Change to "Value: 8 when RBsize is FALSE, 16 when RBsize is TRUE."

Proposed Response   *Response Status* **O**

Cl **100**   *SC* **100.3.5.7**   *P* **108**   *L* **21**   # i-360
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**
Per the definiiton of RBsize it has values of TRUE & FALSE to the following statement
cannot be correct "RBsize of 8 times or 16 times ..."

SuggestedRemedy
Change to RBlen(RBsize) of 8 times or 16 times ... "

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.4.2**   *P* **204**   *L* **22**   # i-361
Remein, Duane   Futurewei Technologie

Comment Type **E**   *Comment Status* **D**
While true this statement is slightly misleading as there is only one US channel"
There is at least one contiguous 10 MHz or greater band of active subcarriers in any single
192 MHz OFDM channel (see Table 100-11)."

SuggestedRemedy
Change to read "There is at least one contiguous 10 MHz or greater band of active
subcarriers in the upstream 192 MHz OFDM channel (see Table 100-11)."

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.4.4**   *P* **204**   *L* **36**   # i-362
Remein, Duane   Futurewei Technologie

Comment Type **T**   *Comment Status* **D**
"TYPE: 4-bit binary" but only two are defined (Cl 45 only uses 2 bits also)

SuggestedRemedy
change to "TYPE: 2-bit binary"

Proposed Response   *Response Status* **O**

Cl **FM**   *SC* **FM**   *P* **13**   *L* **13**   # i-363
Grow, Robert   RMG Consulting

Comment Type **ER**   *Comment Status* **D**
The amendment identification is not consistent. I believe it is correct here and most places
in the draft, but not at P.12, L.3. Basically, we have drifted away from all references in the
body of the standard being of the form IEEE Std 802.3bp-20xx, (with document title and
headers using the project designation P802.3bp/D3.1). Though likely to be caught in
publication preparation (especially since this note is instructed to be this way in current
IEEE templates), we should strive for consistency in the body of the document so
publication editors only search for one string that needs to be updated.

SuggestedRemedy
The note is something carried into the published standard and therefore should in that note
be IEEE Std 802.3bp-201x. This may be something that IEEE editorial staff has changed
recently. We should get clear guidance from staff (especially since they are currently
revising the Style Manual). We also use the IEEE Std 802.3bp-201x in the PICS template
and PICS in this draft.

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-363**   Page 64 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **FM**   *SC* **FM**   *P* **13**   *L* **13**   # i-364
Grow, Robert   RMG Consulting

Comment Type   **ER**   *Comment Status* **D**   *EZ AmendList*
There are other approved or likely to be approved amendments to IEEE Std 802.3 that should be concurent or before P802.3bp approval.

SuggestedRemedy
P802.3bw is approved and designated Amendment 1, P802.32by has been designated Amendment 2, P802.3bq Amendment 3 and P802.3bp Amendment 4. br failed to meet conditions for RevCom submittal, by and bq also in Sponsor ballot. Either add an editor's note that other amendment descriptions will be added during publication preparation, or gather the amendment information (I think they are all in P802.3bv).

Proposed Response   *Response Status* **O**

Cl **FM**   *SC* **FM**   *P* **27**   *L* **44**   # i-365
Grow, Robert   RMG Consulting

Comment Type   **ER**   *Comment Status* **D**
I expect the WG Chair will designate an amendment number for this project.

SuggestedRemedy
This note should be updated for the known preceding amendments (bw, by, bq, bp) and any others that the draft assumes to precede this in approval order.

Proposed Response   *Response Status* **O**

Cl **1**   *SC* **1.5**   *P* **29**   *L* **42**   # i-366
Grow, Robert   RMG Consulting

Comment Type   **E**   *Comment Status* **D**
The acronyms list is alphanumeric, not only alphabetic.

SuggestedRemedy
Change alphabetical to alphanumerical.

Proposed Response   *Response Status* **O**

Cl **30**   *SC* **30.3.2.1.2**   *P* **31**   *L* **11**   # i-367
Grow, Robert   RMG Consulting

Comment Type   **TR**   *Comment Status* **D**
The SYNTAX list is not sorted. (It begins with other, unknown, none).

SuggestedRemedy
I assume the correct point is insert after 10GBASE-PRX. Same change for aPHYTypeList. For aMAUType, I believe the insert is after 10GBASE-T.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.6**   *P* **38**   *L* **3**   # i-368
Grow, Robert   RMG Consulting

Comment Type   **T**   *Comment Status* **D**
P802.3bv has comments to put in the specifications for changes to the reserved rows.

SuggestedRemedy
This is possible when amendment order is known, but better is a suggestion the publication editors liked for an early project to individually list the code points as reserved (rather than in blocks), then subsequent amendments can simply indicate a change to the appropriate reserved rows. Encourage support for this approach.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.17aa**   *P* **38**   *L* **17**   # i-369
Grow, Robert   RMG Consulting

Comment Type   **ER**   *Comment Status* **D**
This editorial instruction is wrong. Clause 45 presents registers in assending number. The 2015 revision has 45.2.1.14 describing register 1.16. IEEE Std 802.3bw-2015 inserts 45.2.1.14a describing register 1.18. Register 1.17 belongs between these two register descriptions. (P802.3by inserts 45.2.1.14b and Table 45-17b descriging register 1.19). While the aa is arguably correct (what happens when we need to do the 27th insert and want to wrap to aa), the referenced document isn't correct.

SuggestedRemedy
I recommend using the letter c and giving up on the letter meaning anything about order. Correct instruction to read Insert 45.2.1.14c and Table 45-17c after 45.2.1.14 (before the 45.2.1.14a and Table 45-17a inserted by IEEE Std 802.3bw-2015) as follows:

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-369**   Page 65 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **45**   *SC* **45.2.1.17aa**   *P* **38**   *L* **17**   # i-370
Grow, Robert   RMG Consulting

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

This lettering of inserts illustrates how use of letters is broken given sufficient inserts (in this case two). When discussing this problem with our publication editors in Atlanta, they admitted after consultation with the manager of the IEEE editorial department that what the style manual describes breaks pretty quickly. They agreed a long string of a's is not particularly good. They also did not jump at making letters simply a tag, with alphabetic order not meaning anything (my preferred solution).

SuggestedRemedy

A revision of the Style Manual is underway and this is on the list for better directions. We probably need to apply greater pressure for an answers to our insert issues. I would encourage use of the letter b in this case, not aa.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.131**   *P* **39**   *L* **3**   # i-371
Grow, Robert   RMG Consulting

Comment Type **ER**   *Comment Status* **D**   *Cl45 renum*

IEEE Std 802.3bw has inserted 45.2.1.131 and 45.2.1.132. Because these 802.3bw subclauses are defining registers 1.2101 and 1.2102, the inserts, if we continue to follow using letters, needs to be 45.2.1.130a through 45.2.1.130ak. (The instruction is also in error on the range of inserts as there is a 45.2.1.167 in the draft. This highlights the problem with aa being ambiguous as used on P.39, L.17.

SuggestedRemedy

Option 1 -- an option that I did not present to our publication editors would be to use our amendment number rather than trying to enforce an alphabetical ordered meaning. In that case, these would be 45.2.1.130bn1 through 45.2.1.130bn31. Pretty ugly. Option 2 -- 45.2.1.130a through 45.2.1.130ak. Option 3 -- Personally, I'd prefer not using letters but specify renumbering (but I seem to be in the minority of vocal participants). Doing that the instruction would be: Insert 45.2.1.131 through 45.2.1.167 and sub-clauses after 45.2.1.130 (before the inserts at the same place by IEEE Std 802.3bw), and renumber as required:.

Proposed Response   *Response Status* **O**

Cl **00**   *SC* **0**   *P* **0**   *L* **0**   # i-372
Thompson, Geoffrey   GraCaSI S.A.

Comment Type **G**   *Comment Status* **D**

The addition of yet another flavor to the point-to-multipoint set of amendments to 802.3 reinforces my earlier position that the P2MP clauses deserve their own separate IEEE Standard.

SuggestedRemedy

Re-edit this clause to be a standalone standard (802.3.2 would be my choice). This standard would then provide the foundation during the next revision cycle to have all of the P2MP material added to it. The end result would be separate standards for CSMA/CD & P2P in one and P2MP in another.

Proposed Response   *Response Status* **O**

Cl **101**   *SC* **101.4.4.5.2**   *P* **209**   *L* **4**   # i-373
Remein, Duane   Futurewei Technologie

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

"data carry Resource Element" ? Same issue in ln 5.

SuggestedRemedy

"data carrying Resource Element"

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Comment ID* **i-373**   Page 66 of 68
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   2/22/2016 1:48:28 PM
SORT ORDER: Comment ID

Cl **101** *SC* **101.5** *P* **228** *L* **32** # i-374
Carlson, Steven   Marvell Semiconductor

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

It appears that this section deals with measuring the time delay between the MDI and MII interfaces. This functionality is in 802.3-2015 as Clause 90.

SuggestedRemedy

Please use the standardize mechanisms in Clause 90.
1) Add mandatory support for Clause 90 (Ethernet support for time synchronization protocols) and the TSSI interface. Clause 90 is design to directly support 802.1AS applications and to perform all the necessary measurements and compensate for residency time within the PCS/PMA
2) Remove the existing calculations in 101.5.1/2/3 , as they are not needed with Clause 90 support.
3) Add support for registers: 1.1800 ... 1.1808 and 3.1800 ... 3.1808, which provides the measurement capability and Tx and Rx path delay measurements (min/max) which can then be reported between devices via the PHY link.
As support for 802.1AS across all 802.3 PHYs was the purpose of Clause 90, please use it instead of adding a stand-alone mechanism tothis PHY only.

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **13** *L* **14** # i-375
Healey, Adam   Broadcom Ltd.

Comment Type **E** *Comment Status* **D** *EZ AmendList*

Complete the list of amendments based on the expected order of publication.

SuggestedRemedy

Per comment.

Proposed Response *Response Status* **O**

Cl **1** *SC* **1.4.49a** *P* **28** *L* **18** # i-376
Healey, Adam   Broadcom Ltd.

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

The parenthetical "(EPoC)" seems to be out of place here.

SuggestedRemedy

It is unclear what was intended here. Perhaps the definition should be changed to begin with "A collection of IEEE 802.3 EPON Protocol over Coax (EPoC) Physical Layer specifications for up to 10 Gb/s downstream and up to 1.6 Gb/s upstream point-to-multipoint link...". A simpler alternative would be to delete the parenthetical.

Proposed Response *Response Status* **O**

Cl **100** *SC* **100** *P* **79** *L* **1** # i-377
Healey, Adam   Broadcom Ltd.

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

The editing instruction "Insert new clauses and corresponding annexes as follows" isn't necessary.

SuggestedRemedy

Delete the instruction.

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.2.1.1** *P* **84** *L* **10** # i-378
Healey, Adam   Broadcom Ltd.

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

The "PMD Delay constraints" subclause should not be nested in the PMD service interface definition.

SuggestedRemedy

Suggest moving 100.2.1.1 to the same level in the heirarchy as the PMD service interface subclause (e.g., to 100.2.2 or 100.2.5).

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
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SORT ORDER: Comment ID

Comment ID **i-378**

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Cl **101** *SC* **101.4.3.8.3** *P* **184** *L* **12** # i-379
Healey, Adam Broadcom Ltd.

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

An equation is usually expressed as "variable = value". Equation 101-15 looks odds as it is simply a value.

SuggestedRemedy

The expression seems trivial enough to be included in-line with the previous paragraph and Equation 101-15 seems unnecessary. Altneratively, modify the equation to include the variable that is being assigned a value.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.3.1.4** *P* **257** *L* **4** # i-380
Lin, Ru Shanghai Luster Terab

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

The word "ODFMA" is incorrect.

SuggestedRemedy

It should be corrected as "OFDMA"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.4.1.9.7** *P* **280** *L* **1** # i-381
Lin, Ru Shanghai Luster Terab

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

The subclause number is incorrect.

SuggestedRemedy

It should be corrected as "102.4.1.9.5". Below the title State Diagram, add one sentence as "The CNU PHY Discovery Response transmission control shall conform to the state diagram shown in Figure 102-24."

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.3.4.2** *P* **92** *L* **21** # i-382
Remein, Duane Futurewei Technologie

Comment Type **GR** *Comment Status* **D**

In note c for Table 100-3 there is this statement: "Phase noise up to +- of the subcarrier's center frequencies is excluded from inband specification". This reads a bit odd.

SuggestedRemedy

After +- symbol add "50 kHz"

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* *L* # i-383
Stanton, Penny

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

This draft meets all editorial requirements.

SuggestedRemedy

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 U/unsatisfied Z/withdrawn
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Comment ID **i-383**

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