Cl **00** *SC* **0** *P* *L* # 1079

Mallette, Edwin Bright House Network

Comment Type **E** *Comment Status* **X**

The line numbers are offset from the actual lines. The lines of the text is almost exactly between the two line numbers in the margin. Additionally sometimes the line numbers are on the right margin, sometimes on the left margin, sometimes the line numbers are not present.

SuggestedRemedy

Please correct line numbers in the margins to have them line up with the actual line numbers.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **1** *L* **1** # 1112

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

All editorial notes to the TF and/or Clause Editors should be clearly marked as such.

SuggestedRemedy

Preface all editorial notes intended as reminders to the TF and/or clause editors with "EDITORS NOTE (to be removed prior to publication): " if not already done so.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **15** *L* **42** # 1114

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **X**

Initially against Cl 56.5.2 pg 15 line 42 but has a global nature.
I don't see any proposed changes to text just additions.
In generally I think this suggested solution is in keeping with previous amendment wording and should be followed globally in the draft.

SuggestedRemedy

Change from:
"Change the text in {some clause number} ..."
To:
"Change {some clause number} ..."
For example the editor instruction in 56.1.2 would read:
"Change 56.1.2 by adding a new paragraph and the associated list of EPoC types at the end of this subclause"
This is consistent with the style used in Std 802.5ba 2010

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **3** *L* **11** # 1113

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Marked text not being used consistently throughout the draft. Some Editors use colored text, some green highlighting, some red highlighting with no apparent consistency.

SuggestedRemedy

Pick one scheme and use it consistently.
Reccommend:
Magenta text for links that require updating
Yellow highlighting for text that may require other updates.

Proposed Response *Response Status* **O**

Cl **01** *SC* **1.4** *P* *L* **10** # 1218

ElBakoury, Hesham Huawei

Comment Type **E** *Comment Status* **X**

The definitions in this clause are numbered 1.4.x. I think x shoud be changed to the number/index of the definition.

SuggestedRemedy

Change x to be 1,2,3, ... etc.

Proposed Response *Response Status* **W**

Assigned as Editorial comment type and reassigned to from Clause "1.4" to "01" by EIC

Cl **01** *SC* **1.4** *P* **12** *L* **15** # 1080

Mallette, Edwin Bright House Network

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

Definition of CCDN is misleading, encouraging the reader to believe that a CCDN cares whether the signals are FDD or TDD.

SuggestedRemedy

Recommend the definition should read as so: A passive or amplifed coaxial distribution network, spanning between the MDI on CNU and the MDI on the CLT, carrying signals in the downstream and upstream direction.

Proposed Response *Response Status* **O**

Cl **01** *SC* **1.4.x** *P* **12** *L* **14** # 1115

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Coax Cable Distribution Network definition uses numerous complementary terms which can be omitted simplifying the definition.

SuggestedRemedy

Change from:
"A passive or amplified coaxial distribution network, spanning between the MDI on CNU and the MDI on the CLT, carrying RF signals in downstream and upstream (FDD mode) or downstream or upstream (TDD mode) direction."
To:
"A distribution network, spanning between the MDI on the CLT and the CNUs carrying RF signals."

Proposed Response *Response Status* **O**

Cl **01** *SC* **1.4.x** *P* **12** *L* **24** # 1215

ElBakoury, Hesham Huawei

Comment Type **E** *Comment Status* **X**

The definition definition of Cyclic Prefix should be simplified.

SuggestedRemedy

Suggest to use the following definition for CP:
A copy of the end of a symbol that is added to the beginning of the same symbol, in order to help mitigate the effects of micro-reflections and similar impairments

Proposed Response *Response Status* **W**

Reassigned to from Clause "1.4" to "01" by EIC

Cl **01** *SC* **1.4.x** *P* **12** *L* **24** # 1116

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Cyclic Prefix definition is applicable to both OFDM and OFDMA not just OFDM

SuggestedRemedy

Change in 6 places (ln 24, 27, 30, 32 & 36 (2x)) from :
"OFDM"
to:
"OFDM or OFDMA"

Proposed Response *Response Status* **O**

Cl **01** *SC* **1.4.x** *P* **12** *L* **30** # 1216

ElBakoury, Hesham Huawei

Comment Type **E** *Comment Status* **X**

Definition of OFDM Symbol uses "In EPoC," which should be deleted because the definition is not only applicable to EPoC

SuggestedRemedy

Delete "In EPoC"

Proposed Response *Response Status* **W**

Reassigned to from Clause "1.4" to "01" by EIC

Cl **01** *SC* **1.4.x** *P* **12** *L* **35** # 1217

ElBakoury, Hesham Huawei

Comment Type **E** *Comment Status* **X**

The definition of QAM Symbol uses "In EPoC" which should be deleted because this definition is not only applicable to EPoC.

SuggestedRemedy

Delete "In EPoC"

Proposed Response *Response Status* **W**

Reassigned to from Clause "1.4" to "01" by EIC

Cl **01** *SC* **101.3.2.3** *P* **52** *L* **26** # 1117

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Why is there a reference here?

Note - problem is in Cl 101.3.2.3, fix will be in Cl1 hence against Cl 01

SuggestedRemedy

Move this informative reference to CL 1 where it belongs.

Proposed Response *Response Status* **O**

Cl **100** *SC* **100** *P* **27** *L* **1** # 1118

Remein, Duane Huawei Technologies

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

A great deal of work was done and approved as baseline material (see Orlando motion #3) and exemplar material on channel model. It would be a disservice to allow this material to be lost.

SuggestedRemedy

Include approved channel model tables in the draft, either in CL 100 or as an Annex 100A

Proposed Response *Response Status* **O**

Cl **100** *SC* **100** *P* **27** *L* **1** # 1110

Hajduczenia, Marek Bright House Network

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

"<EPoC_PMD_NAME>" should be finally replaced with something more meaningfull, that actually represents the PHY type we're working on in this project.

SuggestedRemedy

Suggest to use 10GPASS-XRx as defined in hajduczenia_3bn_10_1113.pdf. If accepted, the following changes will have to be done in D0.2:
- change "<EPoC_PMD_NAME>" and "{EPoC_PMD_NAME}" to "10GPASS-XR"
- change "type EPoc_PMD_Name" to "type 10GPASS-XR"

Proposed Response *Response Status* **O**

Cl **100** *SC* **100.1.4** *P* **27** *L* **22** # 1223

ElBakoury, Hesham Huawei

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

Figure 1 (PMA/PMD Block Diagram) is not consistent with Avi/Mark diagram

SuggestedRemedy

Update this diagram using Avi/Mark diagram once it is accepted by TF.

Proposed Response *Response Status* **O**

Cl **100** *SC* **101.1** *P* **27** *L* **20** # 1119

Remein, Duane Huawei Technologies

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

Need section describing EPoC PMD Types; we will probably only have two so a sub section of 100.1 is appropriate.

SuggestedRemedy

Add new section 100.1.4, renumber subsequent paragraphs, to read:
"PMD Types"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.1** *P* **34** *L* **12** # 1081

Mallette, Edwin Bright House Network

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

the phrase is a coaxial cable distribution network (CCDN) not coaxial distribution network.

SuggestedRemedy

Please correctly refer to this as the coaxial cable distribution network (CCDN.)

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.1** *P* **35** *L* **12** # 1120

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Yet another different mnemonic for the same thing, complete with tautological phrasing.

SuggestedRemedy

Change from:
"These are passive or amplified multipoint coaxial distribution networks (CDN) that connect multiple DTEs using a single shared coaxial link."
To:
"These coaxial cable distribution networks (CCDN) connect multiple DTEs using a single shared coaxial link."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.1** *P* **35** *L* **14** # 1082

Mallette, Edwin Bright House Network

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

The text states: "The architecture is asymmetric, based on a tree and branch topology utilizing passive or amplified coaxial splitters." I'm not sure what an amplified coaxial splitter is but I'm pretty sure we don't use them.

SuggestedRemedy

Recommend rewriting to take out the passive or amplified phrase. Thus "The architecture is asymmetric, based on a tree and branch topology utilizing coaxial splitters.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.1.1** *P* **35** *L* **21** # 1121

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Check notation "-=" (minus equal?), appears as underscore minus or perhaps underscore equal. Either way it is not clear.

SuggestedRemedy

Change to "-=" (minus sign followed by and equal sign).

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.1.2** *P* **35** *L* **31** # 1122

Remein, Duane Huawei Technologies

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

Jitter in the RS, PCS, PMA was 1 TQ in Cl 76 and 1 (+- 0.5) in 74. If we exceed this in EPoC we will break EPON protocol (unless we redefine allowable TQ jitter which I don't think we want to do). Rather than TBD here I would suggest we duplicate the value of 1 that is in CL 76 and deal with problem that may cause us to break that figure

SuggestedRemedy

Change "{TBD}" to "1" as in CL 76.

Also change reference to CL 102

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.2.2** *P* **36** *L* **25** # 1124

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

We don't use no dang OLTs!

SuggestedRemedy

Change OLT to CLT in the first para so the last sentence reads "The RS in the CLT shall operate in unidirectional mode as defined in {66.4}."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.2.2** *P* **36** *L* **37** # 1083

Mallette, Edwin Bright House Network

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

Original text reads: "The RS establishes a temporal mapping"

SuggestedRemedy

I think what's intended is a "temporary" mapping ? Please change. Temporal is ambiguous, unless there's a specific 802.3 definition I'm unaware of.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.2.4.1** *P* **37** *L* **39** # 1125

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Hex representation appears to be inconsistent with 2012 STD.

SuggestedRemedy

Change"0x7F-FE" to "0x7FFE" as used in current standard (section 5 pg 611 line 40). Check style of all hex numbers in the clause and align with current standard.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.2.4.1** *P* **37** *L* **42** # 1135

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

The table reference should be linked given it is internal to the frame document as is the ref to table 101-3 on the next page.

SuggestedRemedy

Link the reference to Table 101-4 properly.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.2.4.2** *P* **37** *L* **28** # 1128

Remein, Duane Huawei Technologies

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

This sub-clause describes exactly what is described in 76.2.6.1 "Functional specifications for multiple MACs" of the current standard but uses slightly different wording increasing the potential for introducing errors in the standard.

SuggestedRemedy

Remove the text and tables under 101.2.4.2 and reference 76.2.6.1 noting that CLT is equivalent to OLT and CNU is equivalent to ONU for this function.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3** *P* **42** *L* **1** # 1099

Hajduczenia, Marek Bright House Network

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

As of D0.2, it is anticipated that the EPoC Clause 101 is going to include both TDD and FDD features. Based on discussions we had in York, UK, it is likely that TDD and FDD will not get implemented in a single SoC due to power constraints, large die size, as well as lack of clear drive for such two-mode chipsets.

SuggestedRemedy

To simplify reading of the Clause 101 and facilitate separating FDD and TDD specific features, I suggest that we implement changes to the Clause 101 structure as outlined in hajduczenia_3bn_01_1113.pdf
Summary of changes:
- separate the PCS functions for FDD and TDD, making complete data paths. Where possible use cross referencing, but otherwise keep both data paths independent and complete
- organize PICS for Clause 101 in a specific fasion, keeping FDD and TDD specific PICS in separate subclauses, and have one subclause with PICS applicable to both modes of operation.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3** *P* **42** *L* **1** # 1108

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

Right now, we have the following organization of subclause 101.3:
101.3.1 Overview
101.3.2 PCS transmit function
101.3.3 PCS receive function
However, there are some elements which are embedded in 101.3.2 right now (LDPC FEC definitions) which are applicablt to Tx and Rx paths alike. These should be lifted up to level 3 heading

SuggestedRemedy

Implement the following outline for subclause 101.3
101.3.1 Overview
101.3.2 Low Density Parity Check (LDPC) Forward Error Correction (FEC) codes
101.3.3 PCS transmit function
101.3.4 PCS receive function

Use the following structure for 101.3.2
101.3.2.1 LDPC codes - copy content from page 52, lines 13-35 with the associated tables 101-5 and 101-6
101.3.2.2 LDPC matrix definition - copy content from 101.3.2.3.1 in D0.2

See hajduczenia_3bn_06_1113.pdf for tracked changes (diff relative to D0.2)

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.1** *P* **42** *L* **10** # 1126

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

modes should be plural

SuggestedRemedy

Change "mode" to "modes of" in 1st sentence.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.1** *P* **42** *L* **12** # 1123

Remein, Duane Huawei Technologies

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

Data rate is a function of much more than assigned RF spectrum.

SuggestedRemedy

Strike the phrase "in the function of the assigned RF spectrum".

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.1** *P* **42** *L* **15** # 1127

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

The sentence composing the 2nd para contains disjointed subjects. Reword the para.

SuggestedRemedy

Change to:
This subclause also specifies a forward error correction (FEC) mechanism to increase the available link budget. Idle control character insertion and deletion mechanisms are specified to accommodate rate adaptation between the RS operating at 10 Gb/s and the EPoC PCS and PMD sub-layers operating at data rates below 10 Gb/s.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.1.1** *P* **42** *L* **26** # 1129

Remein, Duane Huawei Technologies

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

It seems to me we should be able to represent the DS PHY with a single block diagram, noting the one function that discriminates between TDD & FDD (data detector which appears in all three bd's and the PMA_Signal.request which is only used in the TDD mode).

SuggestedRemedy

Remove Figure 101-1 and 101-3, add notes to 101-2 noting that data detector and PMA_Signal.request are TDD specific.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2** *P* **42** *L* **35** # 1136

Remein, Duane Huawei Technologies

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

Data rate is a function of much more than assigned RF spectrum and the configured operation mode.
Same issue in 101.3.3 PCS receive function pg 67 ln 3 and CNU "transmit" function in the same para

SuggestedRemedy

Strike the phrase "depending on the allocated RF spectrum and the configured operation mode" in three places.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.1** *P* **46** *L* **4** # 1084

Mallette, Edwin Bright House Network

Comment Type **E** *Comment Status* **X**

Double preoposition problem in the following text: "control characters inserted in between individual"

SuggestedRemedy

Please remove the word "in".

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.1.2** *P* **47** *L* **5** # 1085

Mallette, Edwin Bright House Network

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

There's an issue with the following phrase "It is set to true following initialization and every reset."

SuggestedRemedy

Suggest addition of my new fatorite word "at" to make the new sentence read like so: "It is set to true following initialization and at every reset."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.2** *P* **52** *L* **3** # 1095

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

There are many references in Clause 101 right now, which use "{xxx}" format. I believe the correct format for these would be to use green background (these are cross references to other locations in 802.3 that we do not have right now in our draft)

SuggestedRemedy

Changes all cross references using the format "{xxx}" to "xxx" with green background. This applies to Clause 101 only.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.2.2** *P* **52** *L* **4** # 1130

Remein, Duane Huawei Technologies

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

It seems we didn't need to make these exceptions in 802.3av, where the data may be equally bursty. I seen no reason to add this fluff.

SuggestedRemedy

Strike from "with the following exceptions:" to the end of the sub-clause.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3** *P* **52** *L* **11** # 1097

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

The title of subclause 101.3.2.3 should read "FEC Encode" for consistency with 101.3.2.2 as well as 10G-EPON definitions

SuggestedRemedy

Similarly, change "101.3.3.1 FEC decoding process" to "101.3.3.1 FEC Decode"; change title of Figure 101–9 to read: "FEC Encode, input process state diagram"; change title of Figure 101–10 to read: "FEC Encode, output process state diagram (CLT)"; change title of Figure 101–14 to read: "FEC Decode input process state diagram (CNU)"; change title of Figure 101–15 to read: "FEC Decode output process state diagram (CNU)"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3** *P* **52** *L* **11** # 1107

Hajduczenia, Marek Bright House Network

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

In the downstream direction for FDD mode, the FEC Encode process should be combined together with the Data Detector process, just like it was done in 10G-EPON PCS (see 802.3-2012, 76.3.2.4 and 76.3.2.5 - state diagrams are only included in 76.3.2.5 and combine both functions).

SuggestedRemedy

Implement changes shown in hajduczenia_3bn_04_1113.pdf (changes are tracked relative to D0.2).

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3** *P* **52** *L* **26** # 1106

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

Move out the references included in

{to be included in informative references: [1] R. G. Gallager, “Lowdensity parity check codes,” IRE Trans. Inform. Theory, vol. IT-8, pp. 21–28, Jan. 1962.; [2] T. Richardson and R. Urbanke, “Modern Coding Theory," Cambridge University Press, 2008}

into Annex A (book 1) and mark the references accordingly in text.

SuggestedRemedy

Per comment

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3** *P* **52** *L* **30** # 1131

Remein, Duane Huawei Technologies

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

amplifiers are no longer the qualifying item. Tables 101-5 & 101-6 are include this error and can be more precise.

SuggestedRemedy

Change in two places in this para from:
"on amplified"
To:
"in TDD mode"
Change Table 101-5 and 101-6 to that shown in remein_3bn_03_1311.pdf, updating all references as needed.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3** *P* **52** *L* **30** # 1100

Hajduczenia, Marek Bright House Network

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

Per technical decision 95, LDCP codes included in Table 101-5 and 101-6 will be used for "for Node + N, N >= 0" plant, which essentially covers both the amplified and passive plant. It is therefore incorrect to state that these codes are used for "amplified CCDN"

SuggestedRemedy

Replace all references to "amplified CCDN" with "CCDN" - 6 intances in total in Clause 101

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3** *P* **52** *L* **36** # 1101

Hajduczenia, Marek Bright House Network

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

Titles of Tables 101-5 and 101-6 do not make much sense. The code shown in Table 101-5 is used by the CLT to encode, but also at the CNU to decode data stream. This code is used in downsteram direction.
The code shown in Table 101-6 is used in the upstream direction, and not just in the CNU.

SuggestedRemedy

Change title of Table 101-5 to read: "LDPC code used in the downstream direction"
Change title of Table 101-6 to read: "LDPC codes used in the upstream direction"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.1** *P* **53** *L* **36** # 1086

Mallette, Edwin Bright House Network

Comment Type **E** *Comment Status* **X**

Two occurrences of "in this specification." These are three words that can be removed from this specification (:P) altogether. Example text: "In this specification, the sub-matrix Hi,j is represented by a value in {-1, 0,*f*, L-1},"

SuggestedRemedy

Please remove occurrences of "in this specification" and just state how it works.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **53** *L* **50** # 1139

Remein, Duane Huawei Technologies

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

There is no reason to think that the LDPC encoding process will be significantly different between CNU & CLT.

SuggestedRemedy

Combine 101.3.2.3.2 & 101.3.2.3.4 into a single section titled "LDPC FEC encoding process"
Likewise combine 101.3.2.3.3 & 101.3.2.3.5 into a single section titled "LDPC codeword transmission order"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **54** *L* **1** # 1094

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

Tables with individual LDCP codes might be more readable if we try to fit each table complete into a single page of text.

SuggestedRemedy

Implement changes as shown in hajduczenia_3bn_02_1113.pdf (only clean version is shown, since there are no technical changes)

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **57** *L* **27** # 1098

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

" ... FEC encoder accumulates BQ(see Table 101–5) of these 66-bit blocks ... " - it would be much simpler to read the text if the names of variables, constants and functions were identified with italics.

SuggestedRemedy

Apply italics to the names of variables, constants and functions. For example, look at page 59, line 53.
This comment also applies to Clause 102.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **57** *L* **28** # 1132

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

suggested rewording

SuggestedRemedy

Change from:
"... the redundant first bit (i.e., sync header bit <0>) in each 66-bit ..."
to:
"... the redundant sync header bit <0> in each 66-bit ..."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **57** *L* **32** # 1087

Mallette, Edwin Bright House Network

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

Missing reference..."calculates CRC40 (see)".

SuggestedRemedy

Please correct the missing reference. I assume it should be a TBD reference ?

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **57** *L* **33** # 1102

Hajduczenia, Marek Bright House Network

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

reference missing in the text: "Next, the FEC encoder calculates CRC40 (see)"

SuggestedRemedy

Replace the text with: "Next, the FEC encoder calculates CRC40 (see 101.3.2.3.6)" and make the reference live

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **57** *L* **37** # 1103

Hajduczenia, Marek Bright House Network

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

The value of constants such as FR, CPL, CP, and CQ should be defined through reference to Table 101-5

SuggestedRemedy

Insert "(see Table 101-5)" after:
FR in line 38
CQ in line 40
CPL in line 41
Cp in line 42
Make link live

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.2** *P* **57** *L* **42** # 1096

Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **X**

"(binary “0”)" - previously, we used a more descriptive text of "(with the binary value of “0”)"

SuggestedRemedy

In Clause 101, change any instances of "(binary “0”)" to "(with the binary value of “0”)"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.3** *P* **57** *L* **46** # 1104

Hajduczenia, Marek Bright House Network

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

"... are then transferred towards the DataDetector" is technically incorrect. In the downstream direction, at the FDD CLT Tx, Data Detector is incorporated with the FEC Encode, just like it is done in 10G-EPON PCS.
Once FEC encoded, data is sent to the PMA and not to Data Detector.

SuggestedRemedy

Change 3 instances of "Data Detector" to "PMA" on page 57
Change "Data Detector" to "PMA" in Figure 101-8. Figure 101-13 is correct as of D0.2

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.3** *P* **57** *L* **46** # 1133

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

"are then transferred towards the Data Detector"
Stating that we transfer A towards B does not mean it arrives there (definition below).
Toward - 1. in the direction of.

SuggestedRemedy

Change to "are then transferred to the Data Detector"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.4** *P* **58** *L* **45** # 1111

Hajduczenia, Marek Bright House Network

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

The content of 101.3.2.3.4 is missing today

SuggestedRemedy

Replace 101.3.2.3.4 and 101.3.2.3.5 with the content per hajduczenia_3bn_05_1113.pdf (subclauses 101.3.2.3.4, 101.3.2.3.5, and 101.3.2.3.6)

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.6** *P* **59** *L* **3** # 1105

Hajduczenia, Marek Bright House Network

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

The content of the subclause defining CRC40 used for LDPC code is currently missing. At the last meeting, we discussed the use of CRC40 - see http://www.ieee802.org/3/bn/public/sep13/prodan_3bn_02a_0913.pdf for details.

SuggestedRemedy

Use the content for 101.3.2.3.6 per hajduczenia_3bn_03_1113.pdf (editable sources are provided for reference). Since CRC40 is applicable to both transmit and receive directions, consider moving 101.3.2.3.6 into subclause 101.3.2, immediately after the Introduction subclause (101.3.1), where the reader would be exposed to the CRC40 details before being shown how it is used in the Tx and Rx paths.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.7.1** *P* **59** *L* **8** # 1134

Remein, Duane Huawei Technologies

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

I don't see how these can be constants when you have 3 or four FEC codewords to choose from. At some point in this clause and before encoding you will need to decide which FEC is to be used and at that point you need to "set" these constants, Hence, they are variables.

SuggestedRemedy

Move all to variables. (change "constant" to "variable in def. use "TYPE: 16 bit unsigned integer")

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.7.1** *P* **59** *L* **9** # 1142

Remein, Duane Huawei Technologies

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

The definitions of variables Bq and Cq are imprecise. As noted in another comment these should be variables.

SuggestedRemedy

Change the definition of BQ from:
"This constant represents the number of 65-bit blocks within the payload portion of the FEC codeword"
To:
"This variable represents the integer number of whole 65-bit blocks within the payload portion of the FEC codeword minus the 40 bits of CRC"

Change the definition of CQ from:
"This constant represents the number of 65-bit blocks within the parity portion of the FEC codeword."
To:
"This variable represents the integer number of whole or partial 65-bit blocks within the parity portion of the FEC codeword."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.2.3.7.2** *P* **59** *L* **34** # 1141

Remein, Duane Huawei Technologies

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

The definition of variable CPL (see table 101-5 & 101-6) is missing

SuggestedRemedy

Add the defintion of CPL:
"CPL
TYPE: 16 bit unsigned integer
VALUE: see Table 101-5 for FEC
This constant represents the number of parity bits within the last 65-bit block of the FEC codeword parity portion."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3** *P* **67** *L* **5** # 1137

Remein, Duane Huawei Technologies

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

Erroneous discussion of CNU PCS transmit (cut & paste?).

SuggestedRemedy

Reword from:
"In the CNU, the PCS transmit function ..."
to:
"In the CNU, the PCS receive function ..."

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.1.1** *P* **67** *L* **25** # 1138

Remein, Duane Huawei Technologies

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

FEC decoding should not be significantly different between CNU & CLT.

SuggestedRemedy

Combine text from 101.3.3.1.1 & 101.3.3.1.2 into a single section (possibly 101.3.3.1) retitled "LDPC FEC decoding process"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.1.2** *P* **67** *L* **41** # 1140

Remein, Duane Huawei Technologies

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

Are there always 40 bits in the next block of 65 regardless of the FEC being used? I suggest the text be more general and leave the technical details to the state diagrams which are normative.

SuggestedRemedy

See remein_3bn_04_1113.pdf

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.1.3.1** *P* **68** *L* **24** # 1143

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **X**

More constants that are variables

SuggestedRemedy

Move BP, BQ, CQ and dataInSize to 101.3.3.1.3.2 Variables

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.1.3.2** *P* **70** *L* **6** # 1144

Remein, Duane Huawei Technologies

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

The CRC40 must often be calculated over more than BQ 65-bit blocks

SuggestedRemedy

Strike "BQ 65-bit blocks in"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.1.3.5** *P* **73** *L* **14** # 1145

Remein, Duane Huawei Technologies

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

It strikes me as odd to have two states with the same name that do different things.

SuggestedRemedy

Change Left state to: "SEND_IDLE_BLOCK"

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.4** *P* **74** *L* **1** # 1146

Remein, Duane Huawei Technologies

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

Is the decoder a 64B/66B Decoder or a 66B/64B Decoder? The 2012 section 5 standard has 8 instances of 64B/66B Decode and 2 of 66B/64B (no other instances appear in Section 4 or 6).
Term S4 S5 S6
64B/66B 42 67 28
66B/64B 0 2 0

SuggestedRemedy

We should take an action item to correct the two lonely instances of 66B/64B in the current standard (check with 802.3 management first, of course)

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.4** *P* **74** *L* **5** # 1147

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

These exceptions were not deemed required in 802.3av and there is no need to add them here

SuggestedRemedy

Strike "with the following exceptions:" to the end of the sub-clause.

Proposed Response *Response Status* **O**

Cl **101** *SC* **101.3.3.5** *P* **75** *L* **1** # 1148

Remein, Duane Huawei Technologies

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

This sub-clause seems to duplicate 76.3.3.7 "Idle Insertion". Is there any reason we shouldn't just reference what was done before and is known to function properly?

SuggestedRemedy

Replace this entire section with the following:
"In the receiving PCS, the Idle control character insertion process inserts Idle control characters into the data stream with gaps as received from the FEC decoder and 64B/66B decoder, adjusting the effective PCS and PMD data rate to the data rate of the XGMII interface. Effectively, the Idle control character insertion process fills in the gaps created after the removal of FEC parity data, as well as compensates for the derating of the EPoC PMD relative to the EPoC MAC. The EPoC PCS reuses the Idle Insertion defined in 76.3.3.7."

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.1** *P* **81** *L* **43.5** # 1089

Mallette, Edwin Bright House Network

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

This sentence doesn't make sense to me: "The network operates by allowing a subset of CNUs multiplexed in frequency to transmit in the upstream direction at a time." This almost seems like we're saying that the network operates by allowing the CNUs to all talk in the upstream direction at the same time because they're multiplexed in frequency (and not in time.)

SuggestedRemedy

How about we just say: "The network operates by allowing CNUs multiplexed in frequency and in time to share the upstream medium."

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.1** *P* **81** *L* **6.5** # 1088

Mallette, Edwin Bright House Network

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

This following sentence is not accurate. "The P2MP medium is a coax cable distribution network (CCDN) in which active and passive elements are present in the signal's path." It's a medium in which passive elements are present and active elements (e.g. amplifiers, equalizers, etc) may be present. We are engineering for both cases.

SuggestedRemedy

Please correct the sentence. Might I recommend: "the P2MP medium is a coaxial cable distribution network (CCDN) in which active elements (e.g. amplifiers, equalizers, etc) may be present in the signal's path..."

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.1.2** *P* **85** *L* **14** # 1152

Remein, Duane Huawei Technologies

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

Figure 102-3 FEC has landed in Clause 101 not 100. PMA is yet TBD.

SuggestedRemedy

Change to "FEC (Clause 100)" to "FEC (Clause 101)" in 2 places
and change "PMA (Clause 100)" to "PMA (Clause TBD)" in 2 places

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2** *P* **103** *L* **31** # 1181

Remein, Duane Huawei Technologies

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

Figure 102-13 CHECKSIZE "tOctetsRequired" s/b "OctetsRequired" (no "t")

SuggestedRemedy

remove errant "t"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.3** *P* **94** *L* **28** # 1153

Remein, Duane Huawei Technologies

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

link to figure 102-14 incorrect

SuggestedRemedy

reset link to Figure 102-31

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.3** *P* **95** *L* **35** # 1154

Remein, Duane Huawei Technologies

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

How do you set a variable to time?ut???

SuggestedRemedy

Change to "time out"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.3** *P* **96** *L* **24** # 1183

Remein, Duane Huawei Technologies

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

transmitInProgress, definition vague "This array contains one element per each Multipoint MAC Control instance. The element j of this array set to on indicates that the Multipoint MAC Control instance j is in the process of transmitting a frame."
set to on? On what?
Same for transmitPending (change "on" to "TRUE".

SuggestedRemedy

Change "on" to "TRUE" in 2 places

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.3** *P* **96** *L* **42** # 1150
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
PHY_OVERHEAD" should be PHY_OVERHEAD_SIZE"

SuggestedRemedy
Change to "PHY_OVERHEAD_SIZE"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.3** *P* **96** *L* **9** # 1182
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**
"true" s/b "TRUE"

SuggestedRemedy
change "true" to "TRUE"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.4** *P* **97** *L* **16** # 1180
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
Equation 102-2 is cut off left & right.
FECPAYLOADSIZE should have underscores

SuggestedRemedy
Argue with Frame so that equiation fits wihtin margin, add underscores.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.4** *P* **97** *L* **16.5** # 1090
Mallette, Edwin Bright House Network

Comment Type **T** *Comment Status* **X**
CheckGrantSize (??) formula is not clear - copy error ?

SuggestedRemedy
Please re-paste the clean version of the formula.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.4** *P* **98** *L* **9** # 1155
Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **X**
Formula overrun! Formula & reference unreadable

SuggestedRemedy
Argue vehemently with FrameMaker to get the formula to fit in a readable format.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.2.2.7** *P* **104** *L* **40** # 1184
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
In Figure 102-14 CNU Control Multiplexer state diagram the function call for PMD_Overhead is incomplete, should include beta

This will also apply to Figure 102-13 pg 103 ln 40 where the function call "FEC_Overhead" needs to be replaced by PMD_Overhead

SuggestedRemedy
add beta to call so it reads:
PMD_Overhead(sizeof(data_tx)+tailGuard, "beta")

use symbol instead of "beta"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.1** *P* **105** *L* **33** # 1156
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**
There is no obvious reason to indent and separately itemize item c1)

SuggestedRemedy
Make item "c1" new item "d" and renumber subsequent item in this list

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.1** *P* **105** *L* **35** # 1158

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Previously we mentioned TDMA in this item on US transmission. It would be good to reword this closer to the wording in the standard and include OFDMA

SuggestedRemedy

Change item "d)" from
"Multiple MACs operate on a shared medium by allowing only a single MAC to transmit upstream across the network at any given time and frequency."
to:
"Multiple MACs operate on a shared medium by allowing only a single MAC to transmit upstream across the network at any given time and frequency a using an Orthogonal Frequency Division Multiple Access (OFDMA) method."

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.2.4** *P* **106** *L* **45** # 1091

Mallette, Edwin Bright House Network

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

Why do we need to redefine "unit of time_quanta" again ? It's already defined as a constant in 64.2.2.1.

SuggestedRemedy

Recommend referencing all constants to the original text specified in 802.3. Only new constants should have references in Clause 102. We should look at all constants, timers, messages, state diagrams where we are essentially defining (re-defining) the same constant, timer, message, state diagram, etc.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3** *P* **106** *L* **1** # 1092

Mallette, Edwin Bright House Network

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

The Discovery Information Flag references 102.3.6.1 which to my untrained eye looks alot like (is identical to ?) figure 77-3-2.

SuggestedRemedy

Change the reference to 77.32 until we agree to change the Discovery Information Flag.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3** *P* **109** *L* **21** # 1176

Remein, Duane Huawei Technologies

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

Figure titles for Figures 102-16 & 102-17 misconstrued.

SuggestedRemedy

Change from:
"Figure 102–16—Discovery Processing service interfaces (CLT, unicasting instance)
Figure 102–17—Discovery Processing service interfaces (CNU)"

To:
"Figure 102–16—Discovery Processing service interfaces (CLT, broacase instance)
Figure 102–17—Discovery Processing service interfaces (CLT, unicast instance)"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.1** *P* **110** *L* **31** # 1157

Remein, Duane Huawei Technologies

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

Remove editors note and replace xref with 75.7.14. Five instances of this xref exist.

SuggestedRemedy

Remove editors note and replace xref with 75.7.14 in 5 places (2x pg 110, 2x pg 111 and 1x pg 113)

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.1** *P* **111** *L* **51** # 1224

ElBakoury, Hesham Huawei

Comment Type **E** *Comment Status* **X**

There is a typo in "The value of syncTime includes gain adjustment interval (Treceiver_settling), clock synchronization interval (Tcdr), and code?roup alignment interval (Tcode_group_align),
as specified in X.7.14."

SuggestedRemedy

replace "code?roup" by "codegroup"

Proposed Response *Response Status* **W**

Assigned to comment type Editorial by EIC

Cl **102** *SC* **102.3.3.2** *P* **111** *L* **17** # 1159

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

highlight "default value" here, in line 25. and 7 other instances to indicate this needs to be updated with a real value

SuggestedRemedy

highlight "default value" in each instance

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.2** *P* **111** *L* **50** # 1160

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

What is a "code?roup"?

SuggestedRemedy

Change to "code-group" per text in standard.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.2** *P* **111** *L* **52** # 1161

Remein, Duane Huawei Technologies

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

The last sentence in this para is likely to change as we have yet to define the exact structure of the US transmission.

SuggestedRemedy

Either:
- highlight the text
<OR>
- replace the text with correct wording (if decided in this meeting) such as:
"During the synchronization time a CNU sends preamble (SP, see Y.3.2.5.2). Immediately after the preamble the CNU transmits Start of Burst delimiter pattern (BURST_DELIMITER, see Y.3.2.5.2)."

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.5** *P* **111** *L* **46** # 1178

Remein, Duane Huawei Technologies

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

The definition of syncTime is probably incorrect for EPoC, expecially as it include codegroup alignment.

SuggestedRemedy

If a new definition cannot be agreed upon or the existing definition verified to be correct then highlihgt the definition as needing attention and preface with editors note:
"EDITORS NOTE: the Task Force needs to agree that this definition of syncTime is acceptable."

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.5** *P* **112** *L* **37** # 1177

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Missing line feed before "discovery: Flag specifying ..."

SuggestedRemedy

Add linefeed

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.5** *P* **112** *L* **38** # 1162

Remein, Duane Huawei Technologies

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

12 instance of "Table 31A?" exist in the draft, all refer to Table 31A-1

SuggestedRemedy

replace with "Table 31A-1"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.5** *P* **112** *L* **44** # 1151
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**
Missing line feed in front of "discoveryInformation

SuggestedRemedy
Add linefeed before "discoveryInformation"

Note a technical comment suggests removing this parameter, if approved that comment takes precedence.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.5** *P* **113** *L* **19** # 1174
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**
Spare white space lines 19 & 25

SuggestedRemedy
save bits, strike the offensive white space.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.3.5** *P* **114** *L* **22** # 1163
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
One stray "laserOffTime:" remaining

SuggestedRemedy
Change to "rfOffTime:"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.4.5** *P* **124** *L* **17** # 1164
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
What is a "time?arying aspect of the network"?

SuggestedRemedy
Change "time?arying" to "time-varying"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.5.2** *P* **127** *L* **34** # 1165
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
The inherited definition of BurstOverhead is likely incorrect and should reflect that it has yet to be nailed down.

SuggestedRemedy
Change from:
"This variable represents the burst overhead and equals the sum of rfOnTime, rfOffTime, syncTime and an additional two time_quanta to account for END_BURST_DELIMITER and two leading IDLE vectors of the payload. This variable is expressed in units of time_quanta."
To:
"This variable represents the burst overhead and equals the sum of rfOnTime, rfOffTime, syncTime and an additional {TBD} time_quanta to account for END_BURST_DELIMITER and two leading IDLE vectors of the payload. This variable is expressed in units of time_quanta."
Highlight the definition.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.5.3** *P* **129** *L* **46** # 1166
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **X**
The first column of Table 102-1 is incorrect. It reads
X 1 1 1 0 and should read
X 1 0 1 0 (per Table 77-1)

SuggestedRemedy
Change first column to read X 1 0 1 0 as in Table 77-1

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.5.6** *P* **136** *L* **1** # 1149

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Figure 102-31 cut off to left of figure

SuggestedRemedy

Resize figure so it fits on the page

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.6.1** *P* **140** *L* **20** # 1173

Remein, Duane Huawei Technologies

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

Table 102-3 "GATE MPCPDU discovery information fields" needs updating for EPoC. Is there any reason to extend this for EPoC? I see none.

SuggestedRemedy

Summaer of proposed changes:
Remove all references to "Discovery Information, Table 102-3 & 102-6

See remein_3bn_05_1113.pdf for details

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.6.3** *P* **143** *L* **52** # 1168

Remein, Duane Huawei Technologies

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

"RFOff Time" & "RFOn Time" missing space

SuggestedRemedy

Change to "RF Off Time" & "RF On Time", remove Editors Note line 49.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.6.3** *P* **144** *L* **34** # 1169

Remein, Duane Huawei Technologies

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

More of a question to the TF than a comment but RF On/Off time is specifies at an 8 bit quantity in TQ or 4.096 uS. My assumption is that this is sufficient for RF transmitter turn-on/turn-off and would just like the RF experts in the TF to confirm.

SuggestedRemedy

Hopefully non and we reject this.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.6.3** *P* **144** *L* **34** # 1167

Remein, Duane Huawei Technologies

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

Don't have lasers to turn on & Off in Figure 102-35 & Figure 102-36 and elsewhere.
11 instances of "laserOn" (including 2 of laserOnTimeCapability)
5 instances of Laser On
12 instance of laserOff (including 2 of laserOffTimeCapability)
5 instances of Laser On

SuggestedRemedy

Change "laser" to "RF" in 29 places
Change "laser" to "rf" in 4 places

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.3.6.4** *P* **146** *L* **42** # 1170

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

What is "Target RFn Time"

SuggestedRemedy

Change to "Target RF On Time"

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.4** *P* **147** *L* **32** # 1172

Remein, Duane Huawei Technologies

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

I don't see a reason (at the moment) to keep this sub-clause. We shouldn't be Discovering "dual-rate systems" in EPoC. Maybe dual channel or multi-channel but not strictly dual-rate, and then I don't think multi-channel systems will be handled this way.
This will also affect confirmDiscovery function (see pg 129 ln 30), and CNU GATE Processing SD Figure 102-30 pg 134 (Ref SD in Cl 64-28).

SuggestedRemedy

In the interests of being conservative mark this section for removal before WG ballot with Editors Note. Same for confirmDiscovery. Mark Figure 102-30 for possible change using editors note.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.4.1** *P* **147** *L* **46** # 1171

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Remove "EDITORS NOTE: the above para referenced Clause Z rather than Clause 77 for 10G-EPON."

SuggestedRemedy

strike.

Proposed Response *Response Status* **O**

Cl **102** *SC* **102.4.1.1** *P* **148** *L* # 1179

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Missing space between table 102-9 and shows "Table 102–9shows"

SuggestedRemedy

change to "Table 102–9 shows"

Proposed Response *Response Status* **O**

Cl **102** *SC* **n/a** *P* **81** *L* **48** # 1175

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Various editorial comments:
Item PgLnChange From
1 8149an CNU
2 8128typically inserted in between
3 94238×(PHY_DATA_SIZE + PHY_OVERHEAD_SIZE)
4 9447defined in CNU and
5 9535set the time?ut interval
6 9719the notation ??represents

SuggestedRemedy

Change To{Remarks}
1 a CNU {Global an CNU -> a CNU (s/b 16)}
2 typically inserted between transmission windows
3 8 × (PHY_DATA_SIZE + PHY_OVERHEAD_SIZE){white space on "8 x (PHY…"}
4 defined in the CNU and
5 set the time out interval
6 the notation?x? represents{copy fm line 40}

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1** *P* **15** *L* **14** # 1187

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

More redundant words. Are there any other types of Coax networks than passive and amplified?

SuggestedRemedy

Strike "passive or amplified"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1** *P* **15** *L* **17** # 1219

ElBakoury, Hesham Huawei

Comment Type **ER** *Comment Status* **X**

The Paragraph "Furthermore, EFM also introduces the concept of EPON Protocol over Coax (EPoC) networks, in which a P2MP network topology is implemented over a passive or amplified coax distribution network (CCDN), along with extensions to the MAC Control sublayer ....." should use minimal augmentation to the MAC instead of extensions to the MAC.

SuggestedRemedy

Replace "extensions to the MAC" with "minimal augmentation to te MAC"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1** *P* **15** *L* **18** # 1188

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

I suspect we will change more than just MAC Control, RS and PMD.

SuggestedRemedy

Change from:
"along with extensions to the MAC Control sublayer and Reconciliation sublayer as well as coaxial PMDs to support this topology"
To:
"with extensions to the MAC Control sublayer, Reconciliation sublayer as well as a complete PHY (PCS, PMA and PMD) to support this topology"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1** *P* **15** *L* **34** # 1220

ElBakoury, Hesham Huawei

Comment Type **ER** *Comment Status* **X**

Clause 102 is omitted from the phrase "The EFM Architecture is further extended in Clause 100 and 101 by the addition of EPoC.

SuggestedRemedy

This phrase should include Clausew 012 and be replaced by the following phrase:
The EFM Architecture is further extended in Clause 100, 101 and 102 by the addition of EPoC".

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1** *P* **15** *L* **35** # 1189

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

The text seems to have omitted Cl 102 here

SuggestedRemedy

Change from:
"The EFM architecture is further extended in Clause 100 and Clause 101 by the addition of EPoC"
To:
"The EFM architecture is further extended in Clause 100, Clause 101 and Clause 102 by the addition of EPoC"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1** *P* **15** *L* **6** # 1186

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

There are no changes shown in "the third paragraph as shown below"

SuggestedRemedy

Change from:
"Change the third paragraph as shown below"
To:
"Change the third paragraph in the 2012 standard as shown in the fourth paragraph below"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2** *P* **15** *L* **44** # 1190

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

The standards should not address implementations as implied by the word systems below;
"For P2MP coaxial topologies, EFM supports two systems:"

SuggestedRemedy

Change to read:
"For P2MP coaxial topologies, EFM supports two modes."

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2** *P* **15** *L* **46** # 1191

Remein, Duane Huawei Technologies

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

We seem to be enthralled with Clause 101 to the exclusion of mentioning other pertinent clauses.
We also have multiple FEC's.

SuggestedRemedy

Change from:
"EPoC operating in the FDD mode, with a nominal bit rate of up to XXX Mb/s in the downstream direction and up to XXY Mb/s in the upstream direction. The P2MP EPoC PHYs use the {EPoC_PMD_Name} Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA) sublayer, and the mandatory forward error correction (FEC) function defined in Clause 101."
To:
"In the FDD mode EPoC networks operate with a nominal bit rate of up to XXX Mb/s in the downstream direction and up to XXY Mb/s in the upstream direction. The P2MP EPoC PHYs use the {EPoC_PMD_Name} defined in Clause 100. The Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, and mandatory forward error correction (FEC) functions are defined in Clause 101."

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2** *P* **15** *L* **50** # 1192

Remein, Duane Huawei Technologies

Comment Type **ER** *Comment Status* **X**

We seem to be enthralled with Clause 101 to the exclusion of mentioning other pertinent clauses.
We also have multiple FEC's.

SuggestedRemedy

Change from:
""EPoC operating in the TDD mode, with a nominal bit rate of up to XXX Mb/s in the downstream direction and up to XXY Mb/s in the upstream direction. The P2MP EPoC PHYs use the {EPoC_PMD_Name} PCS, the PMA sublayer, and the mandatory FEC function defined in Clause 101."
To:
"In the TDD mode EPoC networks operate with a nominal bit rate of up to XXX Mb/s in the downstream direction and up to XXY Mb/s in the upstream direction. The P2MP EPoC PHYs use the {EPoC_PMD_Name} . The PCS, the PMA sublayer, and the mandatory FEC functions are defined in Clause 101. An augmented multi point to point control protocol (MPCP) is defined in Clause 102."

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2.1** *P* **16** *L* **17** # 1194

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Missing highlight

SuggestedRemedy

Highlight "Clause 102" as missing xfref.

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2.1** *P* **16** *L* **20** # 1221

ElBakoury, Hesham Huawei

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

Figure 56-4a does not exist.

SuggestedRemedy

Add Figure 56-4a.

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2.1** *P* **16** *L* **8** # 1193

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Per style guide Mnemonics are to be introduced in each clause. ODN does not appear prior to this in Cl 56 (2012 ed).

SuggestedRemedy

Change from:
"P2MP ODN topology"
To:
"P2MP Optical Distribution Network (ODN) topology"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.2.2** *P* **16** *L* **40** # 1195

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

It seems that 802.3av didn't see a need to change EPON to 1G-EPON, I don't see any need for us to second guess released work with trivial editing changes that could potential introduce errors in the standards

SuggestedRemedy

Remove the additions of "1G-" in the following phrase:
"This is described in Clause 65 for 1G-EPON,..."
So the phrase reads:
"This is described in Clause 65 for EPON, ..." as in STD 802.3 2012

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.3** *P* **18** *L* **10** # 1196

Remein, Duane Huawei Technologies

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

Surely we know the EPoC Medium at this point in the project

SuggestedRemedy

Change in 2 places from:
"{EPoC_Medium}"
to:
"Coax"

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.3** *P* **19** *L* **21** # 1197

Remein, Duane Huawei Technologies

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

Why is there only one PMD listed here while there are two listed in Table 56-1?

SuggestedRemedy

Change "{EPoC_PMD_Type}" to "{EPoC_CLT_PMD_-Type} as in Table 56-1.
Add row at end of table with "{EPoC_CNU_PMD_-Type}" in 1st column and remaining columns as in previous row.

Proposed Response *Response Status* **O**

Cl **56** *SC* **56.1.5** *P* **19** *L* **27** # 1185

Remein, Duane Huawei Technologies

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

Suggested rewording.

SuggestedRemedy

See remein_3bn_01_1311.pdf

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.1** *P* **21** *L* # 1222

ElBakoury, Hesham Huawei

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

Media type "EPoC segment {EPoC_PMD_Name} does not state whether the upstream/downstream rate is for FDD or TDD

SuggestedRemedy

Add two entries for EPoC_segment, one for TDD and another for FDD.

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.1** *P* **23** *L* **1** # 1200

Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

I suspect it is safe to make some assumptions about split and PHY count, but I'm not sure we know what they are at this point.

SuggestedRemedy

Add footnote "b" to last two entries under "Number of PHYs per segment"

Change footnote "b" to read (observe superscripting):
"bThe number of PHYs in the P2MP segment includes the OLT or CLT PHY."

Add editors note after table 76-1 to read:
"Editors note: for last entry in table 76-1 add footnote as necessary to describe split ratio trade-offs."

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.1** *P* **23** *L* **1** # 1198
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

No line numbers.

SuggestedRemedy

Add line numbers.

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.1** *P* **23** *L* **1** # 1199
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Style of added entry inconsistent with previous entries. Also Mb/s units is in table header and not needed in cell

SuggestedRemedy

Change from:
"EPoC segment {EPoC_PMD_Name}"
to:
"EPoC coaxial segment ({EPoC_PMD_Name})"

Remove "Mb/s" in 2 places

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.2.1** *P* **23** *L* **1** # 1201
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

67.2.1 Trade off between link span and split ratio for P2MP PON architecture

It seems silly to add a new L3 section for an a few lines of text.

SuggestedRemedy

Remove changes to 67.2.1 title
Remove new section 67.2.1a Trade off between link span and split ratio for P2MP EPoC architecture
Simply add a new para to sub-clause 67.2.1 as per note.
Change existing note to clearly id it as editors note and not an editorial instruction by prefacing with "EDITORS NOTE: ".

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.4** *P* **25** *L* **1** # 1202
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

Sub clause 67.4 and 67.5 contain no changes and should not be included.

SuggestedRemedy

Remove unchanged sections 67.4 & 67.5

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.6** *P* **26** *L* **1** # 1203
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **X**

The change to 67.6 is superfluous and, if done incorrectly, can only cause problems.

SuggestedRemedy

Remove added test "(both P2MP PON and P2MP EPoC architectures)" and accompaning editor instruction.

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.6** *P* **26** *L* **13** # 1093
Mallette, Edwin Bright House Network

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

The added text "(both P2MP PON and P2MP EPoC architectures)" does not seem to provide any benefit other than to add additional language that confuses meaning.

SuggestedRemedy

Striking the parenthetical clause would improve readability and not change meaning as all EFM network media segments are already included in the text.

Proposed Response *Response Status* **O**

Cl **67** *SC* **67.6.3** *P* **26** *L* **1** # 1204

Remein, Duane Huawei Technologies

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

Modification to highlighted text.

SuggestedRemedy

Change from:
"This is achieved by mapping the local_link_status parameter to variable 'registered' defined in 64.3.3.2 for 1 Gb/s P2MP links and in 77.3.3.2 for 10 Gb/s links as follows:"
To:
"This is achieved by mapping the local_link_status parameter to variable 'registered' defined in 64.3.3.2 for 1G-EPON links, in 77.3.3.2 for 10G-EPON links, and in 102.3.3.2 for EPoC links as follows:"
use appropriate mark up indications

Proposed Response *Response Status* **O**

Cl **99** *SC* **00** *P* **155** *L* **1** # 1109

Hajduczenia, Marek Bright House Network

Comment Type **ER** *Comment Status* **X**

TOC should be up front in the document and not at the very back

SuggestedRemedy

Move it to the right location, i.e., before the material for Clause 1.

Proposed Response *Response Status* **W**