Cl **00**   *SC* **0**   *P*   *L*   # 1547

Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **A**   *PHY Link term*

We use several terms to the same thing; PHY-Link, PHY Link & PLC.
We should select one and use it consistently. PHY Link is the most prevelent term used.

SuggestedRemedy

Change all instance of "PHY-Link" and "PLC" to "PHY Link"

Response   *Response Status* **C**

ACCEPT.

Cl **00**   *SC* **0**   *P* **n/a**   *L* **0**   # 1563

Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **A**

It is time to start refering to US and DS PMD's uniquely. In clause 45 we have adpoted 10GPASS-XR D for the CLT PMD and 10GPASS-XR-U for the CNU PMD. This differentiation needs to be applied thourghtout the draft.

SuggestedRemedy

Where refering to the CLT PMD use 10GPASS-XR-D
Where refering to the CNU PMD use 10GPASS-XR-U
Where refering to generic capilities or functions it is ok to leave 10GPASS-XR.

This applies to all Clauses.

Response   *Response Status* **C**

ACCEPT.

Cl **00**   *SC* **Table 100-1**   *P* **56**   *L*   # 1527

Solomon, Joe   Comcast

Comment Type **T**   *Comment Status* **A**

The table lists QPSK as a modulation format. I don't think it is actually used. Also listed in table 45-191a (modulation type registers)

SuggestedRemedy

Remove QPSK from both.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

There is no table on page 56. Assuming: Table 100-1 on page 60 does list QPSK under Modulation Type. Removal from Table 100-1 and Table 45-191a would by a Technical Decision. Type changed to T.
Add 32 QAM in Cl 100

Cl **01**   *SC* **1.4.281a**   *P* **20**   *L* **33**   # 1557

Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**

Proposed definition for OFDM channel

SuggestedRemedy

In EPoC the RF spectrum constituting the largest range of OFDM subcarriers given the FFT size.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Use OFDM definition per
http://www.ieee802.org/3/bn/public/wias/wias_laubach_3bn_02a_0214.pdf

---

Cl **100**   *SC*   *P*   *L*   # 1517

Solomon, Joe   Comcast

Comment Type **E**   *Comment Status* **A**

There are multiple references to "occupied spectrum" that should be changed to "occupied bandwidth". These terms were used interchangeably, but since "occupied bandwidth" is the defined term, it should be used exclusively.

SuggestedRemedy

Update references to "occupied spectrum" to "occupied bandwidth"

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add:
EDITORS NOTE (to be removed prior to publication): 802.3 prefers spectrum, and where bandwidth means data capacity. Do we need to change bandwidth to spectrum? Note that in cable industry bandwidth = RF spectrum.

Cl **100**   *SC* **100**   *P* **55**   *L* **4**   # 1500

Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **A**

"Editor's Note: The following outline has not been subject to a baseline motion." - does not matter anymore. It is in the draft. Period.

SuggestedRemedy

Remove this editorial note

Response   *Response Status* **C**

ACCEPT.

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

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

Page 1 of 37
3/19/2014 4:56:03 AM

Cl **100**   *SC* **100.1**   *P* **55**   *L* **6**   # 1504

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

Text for the overview is missing

SuggestedRemedy

Use the following text:
Clause 100 describes Physical Medium Dependent (PMD) sublayer for EPON Protocol over Coax (EPoC) PHY operating at the line rate of up to 10 Gb/s in downstream direction and up to 10 Gb/s in upstream direction, relative to the MAC/PLS service interface.

Response   *Response Status*   **C**

ACCEPT.

Cl **100**   *SC* **100.1.1**   *P* **55**   *L* **11**   # 1505

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

Text for ' Terminology and Conventions' is missing

SuggestedRemedy

Use the text shown in hajduczenia_3bn_09_0314

Response   *Response Status*   **C**

ACCEPT.

Cl **100**   *SC* **100.1.3**   *P* **55**   *L* **18**   # 1506

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

Text for "Positioning of the PMD Sublayer within the IEEE 802.3 Architecture" is currently missing

SuggestedRemedy

Use text and figure from hajduczenia_3bn_10_0314

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

PDF version not submitted. Use text and figure from laubach_3bn_10_0314.pdf

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Cl **100**   *SC* **100.1.4**   *P* **55**   *L* **20**   # 1507

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

The title of "10GPASS-XR PHY Processing Diagram" is very confusing - what is this really supposed to represent?

SuggestedRemedy

Change the title of 100.1.4 to read: "Functional blocks in 10BASE-XR PCS, PMA, and PMD sublayers". Change title on figure 1 to read: "Functional blocks within 10GBASE-XR PCS, PMA, and PMD sublayers"
Change the text on page 55, line 23 to read: "Figure 100-2 illustrates functional blocks within PCS, PMA, and PMD sublayers, and interactions between them in the transmit direction. Figure 100-3 illustrates functional blocks within PCS, PMA, and PMD sublayers, and interactions between them in the receive direction. Clause 100 focuses on functions of the PMD sublayer, Clause 101 - on PCS and PMA, and Clause 102."
Please create a tamplate drawing for upstream direction to reserve space and figure number.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Change the title of 100.1.4 to read: "Functional blocks in 10BASE-XR PCS, PMA, and PMD sublayers". Change title on figure 1 to read: "Functional blocks within 10GBASE-XR PCS, PMA, and PMD sublayers"
Change the text on page 55, line 23 to read: "Figure 100-2 illustrates functional blocks within PCS, PMA, and PMD sublayers, and interactions between them in the transmit direction. Figure 100-3 illustrates functional blocks within PCS, PMA, and PMD sublayers, and interactions between them in the receive direction. Clause 100 focuses on functions of the PMD sublayer, Clause 101 focuses on PCS and PMA, and Clause 102 focuses on PHY Link."

Cl **100**   *SC* **100.1.4**   *P* **56**   *L* **1**   # 1555

Remein, Duane   Huawei Technologies

Comment Type   **ER**   *Comment Status*   **D**   *CLT Downstream PHY Path*

The figure is inconsistent with IEEE style

SuggestedRemedy

Replace with those in remein_b_03_0311

Proposed Response   *Response Status*   **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 2 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.1.4**   3/19/2014 4:56:03 AM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.1.4**   *P* **56**   *L* **1**   *#* 1513
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *CLT Downstream PHY Path*

Several issues in Figure 1

SuggestedRemedy

1) Figure 1 should be Figure 101-2 (minor)
2) "64b/66b/65b ENCODER" should be "64B/66B ENCODER"
3) the way it is drawn, it seems that "LAYER MANAGEMENT" is at the same level as RS and interacts with MAC - it passes through MAC, so line between MAC and PHY should end before it reached red box for "LAYER MANAGEMNT" and "LAYER MANAGEMNT" should go parallel to MAC all the way up
4) NCP is not defined at this time. Either add it up prior to figure explaining what it is, ot it needs to be expanded on.
5) "TDD MARKERS" - remove, TDD is no more
6) TIMESTAMP seems to affect both PCS and LAYER MANAGEMENT blocks - is this the intent?
7) "SCATTERED PILOT MAP" - I do not find any decision on using scattered pilots. Can we rename it "PILOT MAP" and not make forward decisions in a figure ?
8) IFFT is not defined at this time. Either add it up prior to figure explaining what it is, ot it needs to be expanded on.
9) interfaces between layers are usually shown using primitives - see Figure 76-8 as an example - this affects the PCS/PMA, PHY-Link/PMA, and PMA/PMD interfaces
10) line for "Data Detector Signal" should be hatched within PMA sublayer - it is a pass through, with no dedicated pins on the PMA/PCS interface. Note also terminology to name it used in Figure 76-8

See proposed modifications as shown in hajduczenia_3bn_13_0314

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Use laubach_3bn_11_0314.pdf with the following changes; remove details in PHY Link block and refer to CL 102, extending PHY Link functionality to IFFT.

Cl **100**   *SC* **100.1.5**   *P* **56**   *L* **40**   *#* 1508
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**   *PMD Function Specification*

Text in "PMD Types" is currently missing

SuggestedRemedy

Use the text per hajduczenia_3bn_11_0314. Change the number of "PMD types" from "100.1.5" to "100.2" - this is more consistent with Clause 57 structure and make more sense (PMD types have nothing to do with Overview)
Remove 100.1.6 - all content is already covered in 100.1.5

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

1) Clauses 58.1, 59.1, and 60.1 have PMD Type as part of the overview, 2) Numeric designator for "reach", e.g "D1", "U1", has not been defined for EPoC, 3) "up to 10.3125 GBd" from optical typing if needed at all, requires conversion to OFDM/A equivalents and need to evaluate if and how to state.

Insert the following text for 100.1.5:

In the downstream direction, the signal transmitted by the 10GPASS-XR-D type PMD is received by all 10GPASS-XR-U type PMDs. In the upstream direction, the 10GPASS-XR-D type PMD receives data bursts from each of the 10GPASS-XR-U type PMDs.

The asymmetric-rate 10PASS-XR-D type PMD, transmitting in continuous mode and receiving in burst mode, is defined in this clause.
The asymmetric-rate 10PASS-XR-U type PMD, transmitting in burst mode and receiving in continuous mode, is defined in this clause.

EDITORS NOTE (to be removed prior to publication): need to evaluate adding data rate for OFDM/A (reference point MDI) as part of the defintion.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 3 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.1.5**   3/19/2014 4:56:03 AM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2**   *P* **56**   *L* **47**   *#* 1514

Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *PMD Function Specification*

Text of "PMD Function Specification" subclause is missing today.

SuggestedRemedy

Use the outline for 100.2 and text from hajduczenia_3bn_12_0314. Note the change in numbering from 100.2 to 100.3, which is consistent with Clause 75 outline. Some questions for RF experts are also included, especially associated with RF power detection thresholds - new definitions will be likely needed.
Remove 100.2.2.1 - this information is repeated in the specific tables later on anyway.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
1)Section 100.3.1.5 with RF receivers while energy can be detected in PMD, descriminating noise from signal is done post FFT processing in the PMA.
2)Omit section 100.3.5 text and subclauses, retain section header as an OFDM receive process does not parallel an optical receiver for signal detection. Replace with Editors Note:
EDITORS NOTE (to be removed prior to publication); Need to define signal detection.

Cl **100**   *SC* **100.2.2.1**   *P* **53**   *L*   *#* 1526

Solomon, Joe   Comcast

Comment Type **E**   *Comment Status* **A**

BPSK is used for the PLC preamble but not listed in this table or in table 100-1.

SuggestedRemedy

Add BPSK to both.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Page 55 has no table. In Table 100-1 "Modulation Type" reflects the technical decisions for the data channel, but doesn't distinguish PHY Link use. Adding BPSK for data would be a TR. Adding BPSK with an indication of PHY Link only would be an E.

Cl **100**   *SC* **100.2.2.1**   *P* **57**   *L* **49**   *#* 1562

Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **A**

Yet another requirement that the PHY Link use 16-QAM (there are two in Cl 102

SuggestedRemedy

Specify this once in Cl 100 and not here (OK to ref cl 102 with a statement like "Modulation foramt for PHY Link is specified in Cl 102.1.4" (check Cl number as this may move in next draft).

Response   *Response Status* **C**

ACCEPT.

Cl **100**   *SC* **100.2.2.1.1**   *P* **58**   *L* **2**   *#* 1564

Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **A**

We've passed baseline motions and positively responded to comments asking that the baseline channel models be added to the draft. Why aren't they included yet?

SuggestedRemedy

Add Annex 100A (see remein_3bn_04_0313.pdf, also available in framemaker format)

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Editor to work on colocating the "Notes" following Table 100A-2 (pg 28 ln 53 & pg 29 ln 1) with the table proper.
Add editors note after title Clause 100A.4:
"EDITORS NOTE (to be removed prior to publication): PICS have not yet been addressed."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 4 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.2.1.1**   3/19/2014 4:56:03 AM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.3.1**   *P* **54**   *L* **32**   # 1516

Solomon, Joe   Comcast

Comment Type   **T**   *Comment Status*   **A**

The 2nd paragraph needs to be updated to provide the correct way to calculate the number of equivalent 6 MHz channels.

SuggestedRemedy

Replace:
"The number of occupied 6 MHz channels of an OFDM channel is the occupied bandwidth of the OFDM channel divided by 6 MHz.CLTs capable of generating NOFDM-channels of OFDM per RF port, for purposes of the output electrical requirements, are said to be capable of generating Neq equivalent 6 MHz channels per RF port, where Neq = 32*NOFDM for 192 MHz OFDM channels."

with:
"The number of occupied 6 MHz channels of an OFDM channel is the ceiling function applied to the modulated spectrum divided by 6 MHz.For the example, the number of 6 MHz channels in the OFDM channel is ceiling(180.3 MHz / 6 MHz) = 31. CLTs capable of generating NOFDM-channels of OFDM per RF port, for purposes of the output electrical requirements, are said to be capable of generating Neq equivalent 6 MHz channels per RF port, where Neq = 32*NOFDM equivalent 6 MHz channels."

Note that the editor will need to fix the subscripts

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Occupied bandwidth is the sum of the bandwidth (RF spectrum) in all channel frequency allocations (e.g., 6 MHz channel-size) that are occupied by the OFDM channel. Even if one active subcarrier of an OFDM channel is placed in a given standard channel frequency allocation, that standard channel frequency allocation in its entirety is said to be occupied by the OFDM channel.

Occupied bandwidth = channel-size * [upperbracket] (OFDM channel bandwidth / channel-size) [upperbracket]

EDITORS NOTE (to be removed prior to publication): replace "[upperbracket]" with appropriate ceiling symbols. Use formal equation and equation numbering.

Cl **100**   *SC* **100.2.3.1.1**   *P* **55**   *L* **36**   # 1519

Solomon, Joe   Comcast

Comment Type   **T**   *Comment Status*   **A**

The following paragraphs should be removed because they are confusing and do not provide enough detail. In addition, what is discussed here is included normatively in other places in the clause, and so should be removed due to redundancy. As background, these have also been removed from the DOCSIS specification - they are really adapted from single carrier QAM requirements and did not provide enough detail for OFDM.

Please remove "A CLT shall output an RF modulated OFDM signal with the characteristics defined in Table 100-1. The condition for these requirements is the entire OFDM block commanded to a constant power spectral density, except for Phase Noise, Diagnostic Carrier Suppression, and power difference requirements (Table 100-2), and except as described previously in this section.
The CLT shall provide for independent selection of center frequency when the ratio of active bandwidth to excluded bandwidth in the encompassed spectrum is at least 2:1, and with each channel independently meeting the requirements of Table 100-1 except for spurious emissions requirements defined in 100.2.3.3."

SuggestedRemedy

Delete these two paragraphs.

Edit the requirement at line 33 to include Table 100-1:
A CLT shall output an OFDM RF modulated signal with the characteristics defined in Table 100-1, Table 100-2, and Table 100-3.

Response   *Response Status*   **C**

ACCEPT.
Type changed from blank to T

Note: assuming this applies to Page 59, not Page 55.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 5 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **100.2.3.1.1**   3/19/2014 4:56:03 AM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **100.2.3.1.1**   *P* **585**   *L* **29**   # 1518
Solomon, Joe   Comcast

Comment Type   **T**   *Comment Status*   **A**

4th and 5th bullets: power should be calculated in the 6 MHz containing the PLC, not the 400 kHz containing the PLC. The calculation is based on a 6 MHz equivalent channel and not the 400 kHz in which a PLC resides.

SuggestedRemedy

Update these 2 bullets:
* CLT calculates power in 6 MHz containing PLC.
* For the spurious emissions requirements, power calculated for the 6 MHz containing the PLC is the commanded average power of an equivalent 6 MHz channel for that OFDM channel.

Response   *Response Status*   **C**

ACCEPT.

Cl **100**   *SC* **100.2.6.2**   *P* **65**   *L* **48**   # 1523
Solomon, Joe   Comcast

Comment Type   **E**   *Comment Status*   **A**

The final sentence refers to an error rate. It really should refer to an error ratio:
This section describes the conditions at which the CNU is required to meet this error rate.

SuggestedRemedy

Update to:
This section describes the conditions at which the CNU is required to meet this error ratio.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

There is no line 48 on page 65. There is a matching line 48 on page 69.

Cl **100**   *SC* **100.22.6.1**   *P* **65**   *L* **5**   # 1521
Solomon, Joe   Comcast

Comment Type   **T**   *Comment Status*   **R**

First sentence should be clarified to state that the subcarriers are within a given band of spectrum and that they are received simultaneously. Previous text:
The CNU shall be able to accept any range of OFDM subcarriers defined for the CLT transmitter in Table 100-1.

SuggestedRemedy

Rewrite to state:
The CNU shall be able to accept any range of OFDM subcarriers defined between Lower Frequency Boundary and Upper Frequency Boundary simultaneously for the CLT transmitter, as defined in Table 100-1.

Response   *Response Status*   **C**

REJECT. Type changed from blank to T

Found above comment text in Section 100.2.6.1, Page 69, Line 5.
Cannot find "Lower Frequency Boundary" or "Upper Frequency Boundary" terms defined in Table 100-1.

Encourage the commentor to resubmit with clarification.

Cl **100**   *SC* **101.3.4.0.1**   *P* **82**   *L* **50**   # 1549
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**

Seems we have an missing header.

SuggestedRemedy

Change header level for 101.3.4.0.1 LDPC matrix definition from Hl-5 to Hl-4 so it is 101.3.4.1 LDPC matrix definition

Response   *Response Status*   **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 6 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.3.4.0.1**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **101.3.5.3.8.1**   *P* **96**   *L* **21**   # 1554

Remein, Duane   Huawei Technologies

Comment Type   **ER**   *Comment Status*   **A**

IEEE Style guide precludes level 6 headers.
This comment also applies to:
101.3.6.1.3 State diagrams

See 2012 IEEE Standards Style Manual Clause 12.1 the first para of which is copied below.

The body of a standard is usually divided into several major clauses that are further divided into subclauses. The IEEE Standards system for numbering clauses uses Arabic numerals in sequence. A subclause should be numbered by adding a decimal point and number to the clause number (e.g., 5.1). Subclauses may be divided into further subclauses by adding a second decimal point and number (e.g., 5.1.1). Five numbers separated by decimal points is the maximum acceptable subdivision (e.g., 5.1.1.1.1). If necessary, the material should be reorganized to avoid subdivisions beyond this point. An exception to this numbering is allowed for amendments (see 19.2.1 for information on numbering in amendments and corrigenda).

SuggestedRemedy

Restructure all clauses below 101.3.5.3.8 State diagrams to bring them up to the same level as 101.3.5.3.8 State diagrams as shown below:
101.3.5.3.8 Variables
101.3.5.3.9 Functions
101.3.5.3.10 Messages
101.3.5.3.11 State diagrams
Note that currently you have:
101.3.5.3.8 State diagrams
...
101.3.5.3.8.5 State diagrams
Which seems rather odd.

Fix 101.3.6.1.3 State diagrams in a similar manner.

Response   *Response Status*   **C**

ACCEPT.

Cl **100**   *SC* **Table 100-1**   *P* **56**   *L* **19**   # 1525

Solomon, Joe   Comcast

Comment Type   **T**   *Comment Status*   **A**

There are some unnecessary references to the subcarrier spacing and FFT size in the values of table 100-1. They should be removed.

SuggestedRemedy

Edit as follows:
OFDM Symbol Rate FFT Duration - Delete 50 kHz (leave 20)
FFT size: Delete 50 kHz (leave 4096 (4k FFT))
Maximum Number of Data Subcarriers per FFT: Delete 4k (leave 3800 - number of continuous pilot tones.

Response   *Response Status*   **C**

ACCEPT.
Type changed from blank to T

Cl **100**   *SC* **Table 100-1**   *P* **56**   *L* **27**   # 1524

Solomon, Joe   Comcast

Comment Type   **E**   *Comment Status*   **A**

There should not be hyphens in 16-QAM, 64-QAM, etc.

SuggestedRemedy

Change to 16QAM, 64QAM, etc.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Task Force draft needs to be consistent. Either with or without hypen. Pick the convention.

As a note, DOCSIS 3.1 PHY, as seen in Section 7.4.8.1 Modulation Formats, uses hyphens.

Cl **100**   *SC* **Table 100-2**   *P* **60**   *L* **17**   # 1520

Solomon, Joe   Comcast

Comment Type   **E**   *Comment Status*   **A**

The last 2 rows of the table are the same as the first 2 rows.

SuggestedRemedy

Delete redundant rows

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Type changed from blank to E

This has been observedin Table 100-2, however is page 62, line 33.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **100**   Page 7 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **Table 100-2**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **100**   *SC* **Table 100-4**   *P* **65**   *L* **16**   # 1522

Solomon, Joe   Comcast

Comment Type **E**   *Comment Status* **A**

First row, Value for "Variable Bit Loading" - remove "zero valued" as this is not defined and
not really different from zero bit loaded:
Support zero bit loaded and zero valued subcarriers

SuggestedRemedy

Rewrite to:
Support zero bit loaded subcarriers

Response   *Response Status* **C**

ACCEPT.

Cl **101**   *SC* **101.1.2**   *P* **75**   *L* **31**   # 1528

Remein, Duane   Huawei Technologies

Comment Type **ER**   *Comment Status* **A**

References to Cl 77, such as here to 77.2.2.1, should be changed to Cl 64 where Cl 77
references Cl 64 as in this case to avoid referenceing a reference.

For example here we Ref 77.2.2.1 where it states:
"time_quantum
This variable is defined in 64.2.2.1."
In this case the reference to 77.2.2.1 should be changes to 64.2.2.1

SuggestedRemedy

Change all references to Cl 77 to Cl 64 where a reference to Cl 64 exists in Cl 77.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change reference from 77.2.2.1 to 64.2.2.1 in all time_quanta definitions. Other references
to Clause 77 remain as they are right now.

Cl **101**   *SC* **101.2.1**   *P* **76**   *L* **14**   # 1605

Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**

We seem to have lost a figure 101-1

SuggestedRemedy

Add in a placeholder figure & Caption for the figure 101-1 referenced here (and elsewhere
in this clause). Check all 5 references to Figure 101-1 and ensure they point to the correct
figure.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.

Highlight all reference to Figure 101-1 that are not pointing to the intended figure.

Cl **101**   *SC* **101.2.4.3.2**   *P* **80**   *L* **20**   # 1560

Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **R**

Table 101-4-Reserved LLID values and surrounding text does not reference 10GPASS-XR.
We should have a SC broadcast LLID for EPoC.

SuggestedRemedy

Add Row to Table 101-4-Reserved LLID values below row for 10/10GBASE-PR with the
following values:
LLID: 0x7FF-FD
Used in: 10GPASS-XR
Purpose:
    "Downstream: EPoC SCB
     Upstream: CNU registration"
Change last row 1st column from "0x7F-FD to 0x7F-00" to "0x7F-FC to 0x7F-00"
For all text this subclasue (101.2.4.3.2 LLID) Change any instance of "0x7F-FE" to "0x7F-
FD"
In 101.2.4.1 Variables (pg 77 line 35) Change "0x7F-FE" to "0x7F-FD"

Response   *Response Status* **C**

REJECT.

The need for broadcast LLID dedicated for EPoC has not been demonstrated. It is not
likely that EPoC and EPON signal will be transmitted off the same port. If needed, we can
add one more row for 0x7F-FE LLID pointing to 10GBASE-XR

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 8 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.2.4.3.2**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **101**   *SC* **101.3.2**   *P* **81**   *L* **20**   # 1579
Remein, Duane   Huawei Technologies

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

The statement "The EPoC PCS extends the 10GBASE-PR PCS described in Clause 76 to support operation over the point-to-multipoint coaxial medium architecture." seems a bit disingenuous. It is only true if you consider completely tossing Cl 76 and replacing it with something totally different being "extending"

SuggestedRemedy

Change the sentence to read:
The EPoC PCS supports operation over a point-to-multipoint coaxial medium architecture.
Figure 100-1 illustrates the functional block diagram of the
downstream and upstream path in the EPoC PCS.

Proposed Response   *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

The need for the change is not clear. What the sentence means (and it has been used in various projects over the years) is that we are taking concepts from specific other Clause (here, 76) and apply them to EPoC with specific changes. There is nothing "disingenuous" in this statement.

Cl **101**   *SC* **101.3.4**   *P* **82**   *L* **27**   # 1536
Remein, Duane   Huawei Technologies

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

It appears we already have a normative annex for LDPC codes in Annex 55A.

SuggestedRemedy

Add reference to Annex 55A, remove any duplicate material from Cl 101.

Proposed Response   *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Annex 55A is applicable to 10GBASE-T and given different code word sizes, and different (expected) golden vectors, the usability of this text in EPoC is questionable.

Cl **101**   *SC* **101.3.4**   *P* **82**   *L* **32**   # 1604
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**

We appear to have dropped an "F" in the line
"c i0 ... iFP ¡V 1 pFP = (, fz fz fz ...fz pFC ¡V 1)"

SuggestedRemedy

Change to read:
"Fc i0 ... iFP ¡V 1 pFP = (, fz fz fz ...fz pFC ¡V 1)"
(note the "C" above is subscripted capital c)

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "c = " in line 32, page 82, to "Fc = ".

Cl **101**   *SC* **101.3.4.0.1**   *P* **82**   *L* **50**   # 1580
Remein, Duane   Huawei Technologies

Comment Type **ER**   *Comment Status* **A**

IEEE Style manual does not allow "0" header numbering. The style guide also precluded single sub-headers (i.e., if there is a x.1 there should always be an x.2)

SuggestedRemedy

Change:
101.3.4.0.1 to 101.3.4.1 "LDPC matrix definition"
Added
101.3.4.2 "LDPC (16200, 14400) code matrix" before para pg 84 line 1
101.3.4.3 "LDPC (5940, 5040) code matrix" before para pg 84 line 48
101.3.4.4 "LDPC (1120, 840) code matrix" before para pg 84 line 51

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change:
101.3.4.0.1 to 101.3.4.1 "LDPC matrix definition
No other changes to the draft

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

Cl **101**   Page 9 of 37
SC **101.3.4.0.1**   3/19/2014 4:56:04 AM

Cl **101**   *SC* **101.3.5.1**   *P* **87**   *L* **24**   # 1581

Remein, Duane   Huawei Technologies

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

While the following statement is correct it may (and has, given statements by some TF participants) be misinterpreted to mean that all Idles are removed. The statement should be clarified.
"FEC overhead compensation sub-process, where the PCS discards the remaining excess Idle control characters to prepare space in the de-rated data stream for PHY parity data; at the output of the FEC overhead compensation sub-process, the data stream does not contain any excess Idle control characters."

SuggestedRemedy

Change item b) to read:
"FEC overhead compensation sub-process, where the PCS discards sufficient Idle control characters to prepare space in the de-rated data stream for PHY parity data; at the output of the FEC overhead compensation sub-process, the data stream only contains enough Idle control characters to match the PMD data rate."

Proposed Response   *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

The term "remaining excess Idle control characters" is not ambiguous. Nowhere does the text state that all remaining Idle control characters are removed.

Cl **101**   *SC* **101.3.5.1**   *P* **87**   *L* **28**   # 1606

Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **R**

Excess use of "excess". Not all Idle control characters in the data stream are excess. The following para applies the term excess to all Idle characters, which is incorrect
"The operation of the EPoC MPCP defined in Clause 103 ensures that a sufficient number of excess Idle control characters are present in the data stream, so that the minimum IPG between two adjacent frames is preserved once all excess Idle control characters are removed through the operation of the data rate adaptation and the FEC overhead compensation sub-processes."

SuggestedRemedy

Change to:
"The operation of the EPoC MPCP defined in Clause 103 ensures that a sufficient number of Idle control characters are present in the data stream, so that the minimum IPG between two adjacent frames is preserved once all excess Idle control characters are removed through the operation of the data rate adaptation and the FEC overhead compensation sub-processes."

Response   *Response Status* **C**

REJECT.
The term "excess Idle control character" is used specifically and precisely to identify that there are Idle characters being inserted by MAC to provide enough space for FEC parity and PHY overhead insertion within PCS.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 10 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.3.5.1**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **101**   *SC* **101.3.5.1.5**   *P* **89**   *L* **32**   # 1611
Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **R**

Operations in state diagrams which are order dependent should be contained in the same state diagram. Therefore Fig 101-2 & 101-3 should be combined and Fig 101-4 and 101-5 should be combined.

SuggestedRemedy

Given how up in the air this is at the moment remove the phrase ", in the order show in Figure 101-X1" from the following text
"The CLT PCS shall perform the Idle control character deletion process as shown in Figure 101-2 (data rate adaptation sub-process) and in Figure 101-3 (FEC overhead compensation sub-process), in the order shown in Figure 101-X1. The CNU PCS shall perform the Idle control character deletion process as shown in Figure 101-4 (data rate adaptation sub-process) and in Figure 101-5 (FEC overhead compensation sub-process), in the order shown in Figure 101-X1."

And add an editors note as follows:
EDITORS NOTE (to be removed prior to publication); Figures 101-2 & 101-3 are order dependent and should be combined; the same applies ot figures 101-4 & 101-5"

Response   *Response Status* **C**

REJECT.
Given the ongoing discussion on PMA gearbox and how it will affect the Idle Deletion process, I suggest that changes are done once, and not in several steps.

Cl **101**   *SC* **101.3.5.3.2**   *P* **93**   *L* **43**   # 1578
Remein, Duane   Huawei Technologies

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

Often in binary operations the term "complementing it" means inversion. The reason for adding 25 bits of parity to the 40 bit CRC could be stated more clearly.
This also applies to the text on pg 96 line 10-11.

SuggestedRemedy

Change the sentence:
"The first 25 bits of parity data are inserted into the 65-bit block carrying CRC40 code, complementing it."
to read:
"The first 25 bits of parity data are inserted into the 65-bit block carrying the CRC40 result to form a 65 bit block."

Proposed Response   *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Inversion is referred to as "two's complement" quite consistently throughout 802.3-2012.

Cl **101**   *SC* **101.3.5.3.3**   *P* **93**   *L* **51**   # 1607
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**

Assuming we adopt the PCS/PMA interface discussed on several calls the statement "Once the process of calculating FEC parity is complete, the payload portion of the FEC codeword and the parity portion of the FEC codeword are then transferred towards PMA, one 65-bit block at a time." will no longer be true.

SuggestedRemedy

Change to read:
"Once the process of calculating FEC parity is complete, the payload portion of the FEC codeword and the parity portion of the FEC codeword are then transferred to the PMA."

Response   *Response Status* **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 11 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.3.5.3.3**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **101**   *SC* **101.3.5.3.3**   *P* **94**   *L* **45**   # 1609
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

Figure 101-6 is referred to for both DS (CLT) and US (CNU, pg 95 ln 49, pg 96 ln 8). therefore the tile cannot be correct

SuggestedRemedy

Change the figure title from
"PCS Transmit bit ordering within CLT (downstream)"
to:
"10GPASS-XR PCS transmit path processing"

Response   *Response Status*   **C**

ACCEPT.

Cl **101**   *SC* **101.3.5.3.5**   *P* **95**   *L* **36**   # 1608
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

There have been no proposals discussing this "FEC Selector delimiter" nor has a need for this been demonstrated (in fact just the opposite was shown). We should not indiscriminately add overhead.

SuggestedRemedy

Remove this para.

Response   *Response Status*   **C**

ACCEPT.

Cl **101**   *SC* **101.3.6.1**   *P* **101**   *L* **14**   # 1582
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

Remnants of TDD; "The CNU 10GBASE-XR PCS operating on CCDN shall decode the received data using one of the LDPC (FC, FP) codes per Table 101-6, as selected using register TBD."

SuggestedRemedy

Change statement to read:
"The CNU 10GBASE-XR PCS operating on CCDN shall decode the received data using the LDPC (16200, 14400) code per Table 101-6."

Response   *Response Status*   **C**

ACCEPT.

Cl **101**   *SC* **101.3.6.5**   *P* **109**   *L* **5**   # 1584
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

The following statement "the data rate enforced by the MAC Control" cannot be correct. The MAC control layer only enforces a rate in the DS direction.

SuggestedRemedy

Change:
"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 enforced by the MAC Control (as defined in Clause 103)."
to read:
"In the receiving PCS, the Idle control character insertion process inserts Idle control characters into the gapped data stream as received from the FEC decoder and 64B/66B decoder, adjusting the effective PCS and PMD data rate to the XGMII rate."

And at line 18 change b) from:
"the data rate supported by EPoC PCS and PMD is lower than the data rate supported by MAC Control Client, requiring data rate adaptation between the PCS and MAC."
to:
"the data rate supported by EPoC PCS and PMD is lower than the data rate supported by the XGMII, requiring data rate adaptation between the PCS and MAC."

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Change:
"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 enforced by the MAC Control (as defined in Clause 103)."
to read:
"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 expected by the MAC Control (as defined in Clause 103)."

And at line 18 change b) from:
"the data rate supported by EPoC PCS and PMD is lower than the data rate supported by MAC Control Client, requiring data rate adaptation between the PCS and MAC."
to:
"the data rate supported by EPoC PCS and PMD is lower than the data rate expected by MAC Control Client, requiring data rate adaptation between the PCS and MAC."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 12 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.3.6.5**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **101**   *SC* **101.4**   *P* **112**   *L* **1**   # 1589
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status* **A**

Some of the highlighted text (copied below) in 102.2.3 pg 128 ln 1 belongs to a PMA section on Scattered Pilots. However the text is not in keeping with 802.3 style.
"The CLT MUST synchronize the scattered pilot pattern to the PHY-Link preamble as defined in section 1.1.15 such that in the OFDM symbol that follows the last symbol of the preamble sequence, the subcarrier next to the highest-frequency subcarrier in the PHY-Link is a scattered pilot.
The CLT MUST NOT insert any scattered pilots or continuous pilots within the PHY-Link frequency band.
The CLT MUST synchronize the downstream data randomizer to the PHY-Link preamble as described in the section on "Downstream Data randomization". That is, the CLT must initialize the downstream randomizer just before the lowest frequency data subcarrier of the first OFDM symbol following the preamble.
The CLT MUST synchronize the downstream PHY-Link randomizer to the PHY-Link preamble as described in the section on "Downstream PHY-Link randomization". That is, the CLT MUST initialize the downstream PHY-Link randomizer just before the lowest frequency PHY-Link subcarrier of the first OFDM symbol following the preamble.
EDITORS NOTE (to be removed prior to publication); the highlighted para's above belong in Cl 102 but are captured here as they were brought in via a motion on PHY-Link."

SuggestedRemedy

In Cl 101.4.x add:
"The CLT shall synchronize the scattered pilot pattern to the PHY-Link preamble defined in section 102.2.2 such that in the OFDM symbol that follows the last symbol of the preamble sequence, the subcarrier next to the highest-frequency subcarrier in the PHY-Link is a scattered pilot.
The CLT shall not insert any scattered pilots or continuous pilots within the 400 kHz PHY-Link frequency band."

(see separate comment on actions in Cl 102.2.3 pg 128 ln 1)

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

In Cl 101.4.1 add:
"The CLT shall synchronize the scattered pilot pattern to the PHY-Link preamble defined in 102.2.2 such that in the OFDM symbol that follows the last symbol of the preamble sequence, the subcarrier next to the highest-frequency subcarrier in the PHY-Link is a scattered pilot.
The CLT shall not insert any scattered pilots or continuous pilots within the 400 kHz PHY-Link frequency band."

renumber subsequent sections as required.

Cl **101**   *SC* **101.4**   *P* **33**   *L* **1**   # 1615
BZ, Shen   Broadcom

Comment Type   **T**   *Comment Status* **R**

Add a section 101.4.2

SuggestedRemedy

Response   *Response Status*   **C**

REJECT.
Type was blank, assigned type T
Not clear where and for what purpose

Cl **101**   *SC* **101.4**   *P* **33**   *L* **1**   # 1616
BZ, Shen   Broadcom

Comment Type   **ER**   *Comment Status* **A**

Add subclause 101.4.2 for Constellation structure and mapping for LDPC FEC

SuggestedRemedy

Add material in Clause 101.4.2 with the text and figures in shen_3bn_01_140226Constellation.pdf (docx).

Response   *Response Status*   **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **101**   Page 13 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **101.4**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.1**   *P* **119**   *L* **13**   # 1541
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**   *TDD remnants*

In removing TDD there is no longer a need to set-up the PHY-Link frame size.

SuggestedRemedy

Change:
"The PHY-Link uses a fixed frame format, that is, once it is set-up the PHY-Link frame
length does not change dynamically based on the data being carried."
To:
"The PHY-Link uses a fixed frame format, that is, the PHY-Link frame length does not
change dynamically based on the data being carried."

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Change from:
"The PHY-Link uses a fixed frame format, that is, once it is set-up the PHY-Link frame
length does not change
dynamically based on the data being carried. The PHY Frame shall be aligned with the 128
symbol staggered
pilot pattern as described in {ref}"
To:
"Change to read:
"The PHY-Link uses a fixed frame format, that shall be aligned with the 128 symbol
staggered pilot pattern as described in {ref}"

Cl **102**   *SC* **102.1.1**   *P* **119**   *L* **26**   # 1585
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

Figure 102-1 is a duplicate of 101-2

SuggestedRemedy

Replace with Fig 102-1 & 102-2 with those shown in remein_3bn_07_0314.pdf
Note this puts each message block on byte boundary (see EPFH now at 56b).
Remove editors note pg 120 ln 24
Add Editors note
"EDITORS NOTE (to be removed prior to publication); CRC32 in PHY Link message
blocks was chosen at random and should be verified."

Response   *Response Status*   **C**

ACCEPT.

Cl **102**   *SC* **102.1.2.1**   *P* **122**   *L* **2**   # 1610
Remein, Duane   Huawei Technologies

Comment Type   **TR**   *Comment Status*   **A**

The text and Figure 102–5 are confusing as it implies that bit a0 is the MSB and is
transmitted first.
Is this truly the intent?

Note- Figure 102-9 has the same issue (a0 labeled as MSB but appears to be LSB

SuggestedRemedy

Verify figure is correct. If MSB is to be transmitted first as implied correct figure so it agrees
with msb/lsb nomenclature of Cl 45 (a0 is lsb not msb).

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
See remein_3bn_15_0314.pdf
Remove note regarding frequency.

Cl **102**   *SC* **102.1.3**   *P* **122**   *L* **28**   # 1586
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**   *PHY Link scrambler*

Text in this section is questionable and Figure 102-6 is inconsistent with 802.3 style and
has no obvious output.

SuggestedRemedy

Replace the text and figure with that shown in remein_3bn_06_0314.pdf.

Response   *Response Status*   **C**

ACCEPT.

Cl **102**   *SC* **102.1.3**   *P* **122**   *L* **52**   # 1565
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**

GF[212] incorrect

SuggestedRemedy

12 in GF[212] should be superscript (2^12 not 212)

Response   *Response Status*   **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 14 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.1.3**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.1.3**   *P* **123**   *L* **7**   # 1542
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

The statement below and subsequent para's imply the PHY Link scrambler is congnizent of the sub-carriers.
"The Phy clocks the scrambler once after scrambling one PHY-Link sub-carrier. The Phy scrambles each sub-carrier through an exclusive-OR operation of the 4 bits representing the sub-carrier (vt,f) with the four LSBs of register D0."
However there is no indication of this in the block diagram.

SuggestedRemedy

Add editors note:

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
EDITORS NOTE (to be removed prior to publication); the above statements indicate the PHY Link scrambler is congnizent of sub-carrier loading which may or may not be the case.

Cl **102**   *SC* **102.2.1.1**   *P* **124**   *L* **29**   # 1587
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

DS_PLC_Start parameter (see ref) is now known but it's not the center frequency

SuggestedRemedy

Change:
"The DS PHY-Link is located per the DS_PLC_Start parameter (see ref) that determines the center frequency of the lowest frequency sub-carrier of the PHY-Link information channel. The DS_PLC_Start has a granularity of 1 MHz and determines the position of the PHY-Link in all DS OFDM channels in a multi-channel Phy."
To:
"The DS PHY-Link is located per the "DS PHY Link #n Start" parameter (see 45.2.1.60d.1) that determines the lowest frequency sub-carrier of the PHY-Link information channel. The parameter determines the position of the PHY-Link in all DS OFDM channels in a multi-channel Phy."
Remove highlighting and editors note

Response   *Response Status*   **C**

ACCEPT.
Use PHY Link not PHY-Link per cmt #1547

Cl **102**   *SC* **102.2.1.2**   *P* **124**   *L* **40**   # 1588
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**   *constellation mapping*

PHY Link uses 16-QAM mostly but not always.

SuggestedRemedy

Change:
"The DS PHY-Link shall use a 16-QAM constellation for all information sub-carriers"
to:
"The DS PHY-Link shall use a 16-QAM constellation for all information sub-carriers except during US response to PHY Discovery (see ref) and fine ranging (see ref)."

Proposed Response   *Response Status*   **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Also see cmt 1556
Use PHY Link not PHY-Link per cmt #1547

Cl **102**   *SC* **102.2.1.2**   *P* **124**   *L* **40**   # 1556
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**   *constellation mapping*

This requirement
"The DS PHY-Link shall use a 16-QAM constellation for all information sub-carriers." is a duplicate with that in 102.1.4
"The Phy shall map each scrambled nibble {y0, y1, y2, y3} into a complex number using the 16-QAM constellation mapping shown in Figure 102–7."

SuggestedRemedy

Combine Para 102.2.4.1.1 with 102.2.2 in 102.2.2

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Also see resolution to 1588
Change:
"The Phy shall map each scrambled nibble {y0, y1, y2, y3} into a complex number using the 16-QAM constellation mapping shown in Figure 102–7."
to:
"The Phy maps each scrambled nibble {y0, y1, y2, y3} of normal PHY Link data (i.e., excluding PHY Discovery and Fine Ranging) into a complex number using the 16-QAM constellation mapping shown in Figure 102–7."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 15 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.2.1.2**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **102**	*SC* **102.2.1.3**	*P* **125**	*L* **34**	*#* 1566

Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**

add white space in {u_i,i=0,1,... ,95}

SuggestedRemedy

to read:
{u_i, i=0, 1, ... , 95}

Response   *Response Status*   **C**

ACCEPT.

Cl **102**	*SC* **102.2.1.3**	*P* **126**	*L* **8**	*#* 1567

Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**

missing ref "after scrambling as described in the sub-clause ."

SuggestedRemedy

Add cross ref to Clause 102.1.3

Response   *Response Status*   **C**

ACCEPT.

Cl **102**	*SC* **102.2.3**	*P* **128**	*L* **1**	*#* 1590

Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**   *Pilot text move*

Some of the highlighted text (copied below) in 102.2.3 pg 128 ln 1 belongs to a PMA section on Scattered Pilots (see related comment). Some of the text is duplicated and redundant with text already in Cl 102.1.3.
"The CLT MUST synchronize the scattered pilot pattern to the PHY-Link preamble as defined in section 1.1.15 such that in the OFDM symbol that follows the last symbol of the preamble sequence, the subcarrier next to the highest-frequency subcarrier in the PHY-Link is a scattered pilot.
The CLT MUST NOT insert any scattered pilots or continuous pilots within the PHY-Link frequency band.
The CLT MUST synchronize the downstream data randomizer to the PHY-Link preamble as described in the section on "Downstream Data randomization". That is, the CLT must initialize the downstream randomizer just before the lowest frequency data subcarrier of the first OFDM symbol following the preamble.
The CLT MUST synchronize the downstream PHY-Link randomizer to the PHY-Link preamble as described in the section on "Downstream PHY-Link randomization". That is, the CLT MUST initialize the downstream PHY-Link randomizer just before the lowest frequency PHY-Link subcarrier of the first OFDM symbol following the preamble.
EDITORS NOTE (to be removed prior to publication); the highlighted para's above belong in Cl 102 but are captured here as they were brought in via a motion on PHY-Link."

SuggestedRemedy

Remove:
"The CLT MUST synchronize the downstream data randomizer to the PHY-Link preamble as described in the section on "Downstream Data randomization". That is, the CLT must initialize the downstream randomizer just before the lowest frequency data subcarrier of the first OFDM symbol following the preamble.
The CLT MUST synchronize the downstream PHY-Link randomizer to the PHY-Link preamble as described in the section on "Downstream PHY-Link randomization". That is, the CLT MUST initialize the downstream PHY-Link randomizer just before the lowest frequency PHY-Link subcarrier of the first OFDM symbol following the preamble.
EDITORS NOTE (to be removed prior to publication); the highlighted para's above belong in Cl 102 but are captured here as they were brought in via a motion on PHY-Link."

(see separate comment on actions in Cl 101.4 pg 112 ln 1)

Response   *Response Status*   **C**

ACCEPT.

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

Cl **102**   Page 16 of 37
SC **102.2.3**   3/19/2014 4:56:04 AM

Cl **102**   *SC* **102.2.4**   *P* **128**   *L* **17**   # 1550
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status* **A**
leading period in DS Frame header text

SuggestedRemedy
change from:
102.2.4 .DS Frame
      ^
to:
102.2.4 DS Frame

Response   *Response Status* **C**
ACCEPT IN PRINCIPLE.
change from:
102.2.4 .DS Frame
       ^
to:
102.2.4 DS Frame

Cl **102**   *SC* **102.2.4**   *P* **128**   *L* **23**   # 1568
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status* **A**
Errant ref to Clause 102–1. Should be Figure 102-1

SuggestedRemedy
Change to Figure 102-1

Response   *Response Status* **C**
ACCEPT.

Cl **102**   *SC* **102.2.4**   *P* **128**   *L* **27**   # 1591
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status* **A**
Allowed or required?
Also applies to similar statement in 102.3.3 pg 134 ln 39

SuggestedRemedy
Change pg 128 ln 27
"Table 102–3 lists the allowed message block types."
To:
"CLTs shall use the appropriate message Type fields listed in Table 102-3 in each
message block."

Change pg 134 ln 39
"Table 102–3 lists the allowed message block types."
To:
"CNUs shall use the appropriate message Type fields listed in Table 102-3 in each
message block."

Response   *Response Status* **C**
ACCEPT.

Cl **102**   *SC* **102.2.4.1.2**   *P* **130**   *L* **34**   # 1569
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status* **A**
Editors note has served it's purpose and can be removed

SuggestedRemedy
Remove note.

Response   *Response Status* **C**
ACCEPT.

Cl **102**   *SC* **102.2.4.1.2**   *P* **130**   *L* **38**   # 1575
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status* **A**
reference for CRC32

SuggestedRemedy
for each instance (6) of
"CRC(32). See {ref}"
replace with:
"CRC(32). See Clause 3.2.9"

Response   *Response Status* **C**
ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 17 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.2.4.1.2**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.2.4.1.3**   *P* **130**   *L* **43**   # 1570
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
Typo "files" should be "field" in
The Timestamp Message Block includes a Type files, the PHY Timestamp field and a
CRC(32)

SuggestedRemedy
change to field

Response   *Response Status*   **C**
ACCEPT.

Cl **102**   *SC* **102.2.4.1.3**   *P* **130**   *L* **45**   # 1571
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
{204.8 MHz} is correct, don't need braces, italic or highlight

SuggestedRemedy
change {204.8 MHz} to 204.8 MHz plain text.

Response   *Response Status*   **C**
ACCEPT.

Cl **102**   *SC* **102.2.4.1.3**   *P* **130**   *L* **48**   # 1572
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
Reference known for preamble pointer

SuggestedRemedy
Change
PHY-Link symbol immediately following the Preamble (see ref)
to
PHY-Link symbol immediately following the Preamble (see Figure 102–12)

Response   *Response Status*   **C**
ACCEPT.

Cl **102**   *SC* **102.2.4.2**   *P* **131**   *L* **43**   # 1592
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**
Excessive references

SuggestedRemedy
Change:
"The CLT shall only transmit the valid values of the PHY Instruction field as given in Table
102–5, Table 102–4, and Table 102–6"
To:
"The CLT shall only transmit the valid values of the PHY DA, and OPCODE fields as given
in Table 102–5 and Table 102–6 respectively."

Response   *Response Status*   **C**
ACCEPT.

Cl **102**   *SC* **102.2.4.2**   *P* **132**   *L* **28**   # 1573
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
Ref should point to 102.3.3.2 US EPoC Message Block

SuggestedRemedy
Change:
"Nack indication (see ref)"
to:
"Nack indication (see Clause 102.3.3.2)"

Response   *Response Status*   **C**
ACCEPT.

Cl **102**   *SC* **102.2.5**   *P* **133**   *L* **1**   # 1574
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
duplicate text

SuggestedRemedy
Remove the first sentence in the para ("Once the PHY Discovery window is open the CLT
shall refrain from sending PHY Instructions to any single CNU over the DS PHY-Link,
which would elicit a Response from the CNU, to allow sufficient time for joining CNUs to
respond to the PHY Discovery window.")

Response   *Response Status*   **C**
ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **102**   Page 18 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **102.2.5**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **102** *SC* **102.2.6** *P* **133** *L* **8** # 1612
BZ, Shen Broadcom

Comment Type **TR** *Comment Status* **A**
Material in 102.2.6 has errors and applies to both US and DS so would be better place in Clause 102.1.3

SuggestedRemedy
Replace material in Clause 102.2.6 with the text and figures in shen_3bn_01_140226 FEC Only.pdf (and docx)

Response *Response Status* **C**
ACCEPT IN PRINCIPLE.
Was ER but this is adding technical content to the draft so the editor changed to TR
Use text & outline in shen_3bn_01_140226 FEC Only.docx

Cl **102** *SC* **102.3** *P* **134** *L* **23** # 1594
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **D**
Introductory paragraph for 102.3 Upstream PHY-Link

SuggestedRemedy
Add the following:
Unlike the DS PHY Link, which only uses one message structure, the US PHY Link uses three possible response structures. These structures allow for normal PHY Link message exchange, CNU PHY Discovery and OFDM fine ranging. Clause 102.3.3 describes the message structure for normal PHY Link message exchange. The message structure for CNU PHY Discovery and OFDM fine OFDM fine ranging are described in Clause 102.4.

Note fine ranging may end up in 102.5, editor to add reference as appropriate.

Proposed Response *Response Status* **Z**
REJECT.

This comment was WITHDRAWN by the commenter.

Cl **102** *SC* **102.3.2** *P* **134** *L* **27** # 1576
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A**
Clause 102.3.2 should be subtended from 102.3.1 US PHY-Link physical layer

SuggestedRemedy
Change 102.3.2 US Resource Allocation to L4 header so it becomes
102.3.1.1 US Resource Allocation
Add the following subclauses:
102.3.1.2 US PHY-Link modulation
102.3.1.3 US PHY-Link Subcarrier Block Interleaving

Response *Response Status* **C**
ACCEPT.

Cl **102** *SC* **102.3.3** *P* **134** *L* **39** # 1593
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **A**
Use of type field and valuse should be required.

SuggestedRemedy
Change:
"Table 102–3 lists the allowed message block types."
To:
"CNUs shall use the appropriate message Type fields listed in Table 102-3 in each message block."

Response *Response Status* **C**
ACCEPT.

Cl **102** *SC* **102.3.3.1.2** *P* **135** *L* **5** # 1595
Remein, Duane Huawei Technologies

Comment Type **T** *Comment Status* **A**
It would be good to mention where the CNU SA comes from in this para.

SuggestedRemedy
Add to the end of the para:
"The CNU SA is assigned during the PHY Discovery process (see 102.4.x)."

Response *Response Status* **C**
ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general *Cl* **102** Page 19 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn *SC* **102.3.3.1.2** 3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **102**   *SC* **102.4**   *P* **137**   *L* **472**   # 1577
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **A**
We have adopted the CNU_ID concept and the editors note can be removed

SuggestedRemedy
remove note:
"EDITORS NOTE (to be removed prior to publication): the following text is written assuming we adopt the CNU_ID concept, if this is not the case the Editor should remove references to CNU_ID."

Response   *Response Status* **C**
ACCEPT.

Cl **102**   *SC* **102.4**   *P* **137**   *L* **48**   # 1596
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**
It is not clear what "the appropriate PHY Instructions" are

SuggestedRemedy
Change:
"Upon receipt of a valid PHY Discovery Response, the CLT updates the CNU by allocating and assigning a new port identity (CNU_ID). The CLT calculates an OFDMA Timing Offset and adjusts the CNU's amplitude. The CLT also sets the target value of RF on time and RF off time, which may be different than RF on time and RF off time delivered by the CNU in the PHY Discovery Response. These parameters are transmitted to the CNU via the appropriate PHY Instructions."
To:
"Upon receipt of a valid PHY Discovery Response, the CLT updates the CNU by allocating and assigning a new port identity (CNU_ID). The CLT calculates an OFDMA Timing Offset and adjusts the CNU's amplitude. These parameters shall be are transmitted to the CNU via the CNU_ID Allocation instruction. This instruction uses a broadcast DA with the first EMB being a write to MDIO register TBD {ref cl45}. The value written to register TBD is the CNU MAC address followed by the assigned CNU_ID. Subsequent EMBs are used to write the CNU OFDM Timing Offset register {cl 45 ref}, and CNU Amplitude register {cl 45 ref}. "

Response   *Response Status* **C**
ACCEPT.

Cl **102**   *SC* **102.4**   *P* **137**   *L* **8**   # 1548
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *CL 102 outline*
This Sub-clause is becoming a bit big and ungainly. It would be good to dissect it into several parts

SuggestedRemedy
Change outline of this section as follows:
102.4 PHY Discovery
102.4.1 Overview of PHY Discovery
102.4.1.1 PHY Link acquisition
102.4.1.2 PHY Discovery windows
102.4.1.2.1 Opening the PHY Link Discovery window
102.4.1.2.2 PHY Link Discovery Response
102.4.1.3 Initial OFDM Alignment
102.4.1.4 OFDM fine tuning
102.5.1.5 Link-up declaration
102.4.2 PHY Discovery Processing

See remein_3bn_01_0314.pdf for details.

Response   *Response Status* **C**
ACCEPT IN PRINCIPLE.
Changed to T as proposed response is more extensive then might be legitametly considered "editorial"
Use remein_3bn_10_0314.pdf which reorganized the clause.
Difference between existing (draft 0.4) and proposed clause (subject to FrameMaker comparison capabilities) are shown in remein_3bn_11_0314.pdf

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Cl **102**   *SC* **102.5.1**   *P* **139**   *L* **41**   # 1551
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **A**
What's with the colon in the title?

SuggestedRemedy
remove the colon

Response   *Response Status* **C**
ACCEPT.

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

Cl **102**   Page 20 of 37
SC **102.5.1**   3/19/2014 4:56:04 AM

Cl **45**   *SC* **45.2**   *P* **25**   *L* **32**   # 1466
Hajduczenia, Marek   Bright House Network

Comment Type **ER**   *Comment Status* **A**

Incorrectly marked text: "12 through 2811 through 28" - only "12" should be struck through and replaced with "11"

SuggestedRemedy

Remove strike through from "12 through 28". Strike through "12" and put "11" with underline immediately after "12".

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2**   *P* **25**   *L* **8**   # 1464
Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **A**

Editorial instruction is malformed: "Change Table 45-1 as follows. ."
Similar issue on page 25, like 42 - the text format is also incorrect here.

SuggestedRemedy

Change to read: "Change Table 45-1 as follows." on page 25, line 8
Change to read: "Change Table 45-2 as follows." on page 25, line 42

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2**   *P* **26**   *L* **10**   # 1458
Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **A**   *Table 45-2*

Incorrect marking in Table 45-2: "m.5.15:12m.5.15:13"

SuggestedRemedy

Remove strike through from "m.5.15:12"
Add strike through to "12". Insert "13" immediately after "12" and marke it with underline.

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2**   *P* **37**   *L* **46**   # 1603
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *Cl 45 additions*

Additional Cl 45 registers:
PHY Discovery Start,
PHY Discovery Duration,
PHY Frame Counter,
PHY Timing Offset,
and
PHY Power Offset.

SuggestedRemedy

See remein_3bn_02_0314.pdf (also availalbe in FrameMaker)
Add content at location/register indicated, renumbering as needed.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Per remein_3bn_14_0314.pdf

Cl **45**   *SC* **45.2.1.10**   *P* **39**   *L* **40**   # 1487
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**

Register 1.11 already contains P2MP capability and does not require any extensions to cover EPoC. Register 1.12 should be extended to cover EPON and EPoC alike.

SuggestedRemedy

Remove 45.2.1.10 and include 1.12 as shown in hajduczenia_3bn_01_0314

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Only one entry is available in register 1.12
Create a new PMA/PMD ability register, use bits 0 & 1 for EPoC 10GPASS-XR-U and 10GPASS-XR-D

Cl **45**   *SC* **45.2.1.13a**   *P* **31**   *L* **43**   # 1465
Hajduczenia, Marek   Bright House Network

Comment Type **ER**   *Comment Status* **A**

Material in 45.2.1.13a is all new, and so it does not need to be underlined.

SuggestedRemedy

Remove underline for all material added in 45.2.1.13a, 45.2.1.60a, 45.2.1.60b, 45.2.1.60c, 45.2.1.60d, 45.2.1.60e, 45.2.1.60f, 45.2.1.60g, and 45.2.7a.1

Response   *Response Status* **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 21 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.13a**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**		*SC* **45.2.1.13a**			*P* **31**		*L* **45**		# 1460
Hajduczenia, Marek					Bright House Network

Comment Type **E**		*Comment Status* **A**

Remove editorial note - it is explanatory and not needed in the long run.

SuggestedRemedy

Per comment

Response				*Response Status* **C**

ACCEPT.

Cl **45**		*SC* **45.2.1.4**			*P* **27**		*L* **12**		# 1597
Remein, Duane					Huawei Technologies

Comment Type **T**		*Comment Status* **A**				*Table 45-6*

Register bits 1.4:9 & 10 are assigned twice in table 56-6

SuggestedRemedy

Change top row from
1.4.15:9
To
1.4.15:11 (with 10 in strike-out)

Response				*Response Status* **C**

ACCEPT.
Table 45–6

Cl **45**		*SC* **45.2.1.6**			*P* **28**		*L* **12**		# 1598
Remein, Duane					Huawei Technologies

Comment Type **T**		*Comment Status* **A**				*Table 45-7*

Add PMA/PMD Type selection values to table 45-7

SuggestedRemedy

Change:
1 1 x x x x = reserved for future use (use strike-out)
To:
1 1 1 x x x = reserved for future use
1 1 0 x 1 x = reserved for future use
1 1 0 0 0 1 = 10GPASS-XR-U PMA/PMD
1 1 0 0 0 0 = 10GPASS-XR-D PMA/PMD

Response				*Response Status* **C**

ACCEPT IN PRINCIPLE.

Also add
1 1 1 x 1 x = reserved for future use

Cl **45**		*SC* **45.2.1.6**			*P* **28**		*L* **14**		# 1558
Remein, Duane					Huawei Technologies

Comment Type **T**		*Comment Status* **A**				*Table 45-7*

Add 10GPASS-XR to Table 45-7.
Also in Table 45-7 we don't need to reitterate changes made by other projects.

SuggestedRemedy

in 1.7.5:0:
Change entry 0 1 1 0 1 1 = reserved
to read 0 1 1 0 1 1 = 10GPASS-XR PMA/PMD
(follow perscribed mark-up)

Remove underlineing for 100GBASE-SR4 PMA/PMD, and 40GBASE-ER4 PMA/PMDfn

Response				*Response Status* **C**

ACCEPT IN PRINCIPLE.
See 1598

Cl **45**		*SC* **45.2.1.60a**			*P* **32**		*L* **31**		# 1601
Remein, Duane					Huawei Technologies

Comment Type **T**		*Comment Status* **A**

This and following EPoC specific registers are located at register 1.110 & following. However, given the current rate of register definition we could easily overrun the available register space in this block (next used register is 1.129). For example if we define 8 DS RF Channels we will use registers 1.118 - 1.125 for Channel center frequency registers.

SuggestedRemedy

Reposition all registers currently at 45.2.1.60a - 45.2.1.60g to begin at 45.2.1.106a Table 45-78a starting at register 1.1900. This is the end of PMA/PMD register block.

Response				*Response Status* **C**

ACCEPT IN PRINCIPLE.
Use 45.2.1.107 not 45.2.1.106a

Cl **45**		*SC* **45.2.1.60a**			*P* **32**		*L* **43**		# 1467
Hajduczenia, Marek					Bright House Network

Comment Type **T**		*Comment Status* **A**

It is not clear what "COAX network" is and how it is different from CCDN we define elsewhere.

SuggestedRemedy

Replace "the COAX network" with "CCDN" in all locations in the draft

Response				*Response Status* **C**

ACCEPT IN PRINCIPLE.
Replace with coaxial cable distribution network

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general					*Cl* **45**				Page 22 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn			*SC* **45.2.1.60a**			3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.60a**   *P* **32**   *L* **44**   # 1488
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**

The register maes reference to a new concept, i.e., PHY Discovery", which has not been defined before and it is not clear where one would look for it.

SuggestedRemedy

Insert reference to where "PHY Discovery" is defined in teh current draft, with preference in 45.2.1.60a.1

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add Reference (in D0.4 is 102.4)

Cl **45**   *SC* **45.2.1.60a.1**   *P* **33**   *L* **1**   # 1468
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **R**

It is not clear what "steps necessary to bring the PHY to a "link-up" state" need to be included in the register and how usefulthis information really is. From MAC and management system perspective, either the link is up or it is not.

SuggestedRemedy

Remove editorial note on page 33, lines 6/7

Response   *Response Status* **C**

REJECT.
In order for the MAC to recognise a new CNU it will need to poll to see when a new register has arrived. Given the known issues with polling procedures it makes sense to co-locate this information if possible.
In any case the note will need to be removed eventually but now is not the right time.

Cl **45**   *SC* **45.2.1.60a.2**   *P* **33**   *L* **8**   # 1561
Remein, Duane   Huawei Technologies

Comment Type **TR**   *Comment Status* **A**

Transmit enable (1.110.0)
This register needs to be defaulted to xero (transmit disabled)

SuggestedRemedy

Add to the end of the para:
"Bit 1.110.0 shall default to zero so that no transmission is allowed by the EPoC CNU or CLT prior to being properly configured to operate in the coax environment under which it is being installed."

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
"Bit 1.110.0 shall default to zero so that no transmission is allowed by the EPoC CNU or CLT prior to being properly configured to operate in the coaxial cable distribution network under which it is being installed."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 23 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.60a.2**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.60b.1**   *P* **33**   *L* **43**   # 1469

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

"These register bits indicate the number of downstream OFDM channels in use." should reference which register bits are meant.

SuggestedRemedy

Change to "Register bits 1.111.14 through 1.111.12 indicate the number of downstream OFDM channels in use.". Also, it would be important to indicate how individual values are encoded into these bits.
Insert the follwing text at the end of line 43: "The number of DS OFDM channels is encoded into bits 1.111.14 through 1.111.12 as shown in Table 45-51ba.

Table 45-51ba: Number of DS OFDM channels

| bit 1.111.14 | bit 1.111.13 | bit 1.111.12 | number of DS OFDM channels |

0	0	0	1
0	0	1	2
0	1	0	3
0	1	1	4
1	0	0	5
1	0	1	6
1	1	0	7
1	1	1	8

In 45.2.1.60c, create similar register, i.e.: "US OFDM channels", covering 1.112.14:12. Reproduce changes outlined above for DS OFDM channels register. At this time, we are likely going to provide only one channel, but we could be ready for using multiple upstream channels in paralle.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Change the para to read:"Register bits 1.111.14 through 1.111.12 indicate the number, as a binary encoded integer, of downstream OFDM channels in use. The number is between 1 and TBD; where bit 1.111.12 is the lsb and bit 1..111.14 is the msb."

Cl **45**   *SC* **45.2.1.60b.2**   *P* **33**   *L* **47**   # 1470

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

"These register bits indicate the number of OFDM symbols to be time interleaved in the downstream direction." should reference which register bits are meant.

SuggestedRemedy

Change to "Register bits 1.111.11 through 1.111.7 indicate the number of OFDM symbols to be time interleaved in the downstream direction". Also, it would be important to indicate how individual values are encoded into these bits.
Insert the follwing text at the end of line 48: "The number of OFDM symbols to be time interleaved is encoded into bits 1.111.11 through 1.111.7 as shown in Table 45-51bb."
Insert table per hajduczenia_3bn_02_0314.docx

Similar changes need to be applied to 45.2.1.60c.1

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Change para to read:
"Register bits 1.111.11 through 1.111.7 indicate the number, as a binary encoded integer, of time interleaved OFDM symbols in the downstream direction. The number is between 1 and TBD; where bit 1.111.7 is the lsb and bit 1.111.11 is the msb."

Change para 45.2.1.60c.` to read:
"Register bits 1.112.11 through 1.112.7 indicate the number, as a binary encoded integer, of time interleaved OFDM symbols in the upstream direction. The number is between 1 and TBD; where bit 1.112.7 is the lsb and bit 1.112.11 is the msb."

Cl **45**   *SC* **45.2.1.60b.3**   *P* **33**   *L* **50**   # 1530

Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**   *windowing enum*

We should agree on the DS windowing size enum.

SuggestedRemedy

Move enum as is from editors note to Table 45–51b. Remove editors note

Response   *Response Status*   **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 24 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.60b.3**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.60b.3**   *P* **33**   *L* **51**   # 1471
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**

"These register bits indicate the size of the windowing control for the PMA/PMD in the downstream direction." should reference which register bits are meant.

SuggestedRemedy

Change to "Register bits 1.111.6 through 1.111.4 indicate the size of the windowing control for the PMA/PMD in the downstream direction". Also, it would be important to indicate how individual values are encoded into these bits.
Insert the follwing text at the end of line 53: "The size of the windowing control in the downstream direction is encoded into bits 1.111.6 through 1.111.6 as shown in Table 45-51bc."
Insert table per hajduczenia_3bn_03_0314.docx
Remove editors note on page 33, lines 1-7

Similar changes need to be applied to 45.2.1.60c.2

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to:
"Register bits 1.111.6 through 1.111.4 indicate the size, in OFDM clock samples (204.8 MHz), of the windowing control for the PMA/PMD in the downstream direction".

Change 45.2.1.60c.2 to:
"Register bits 1.112.6 through 1.112.4 indicate the size, in OFDM clock samples (204.8 MHz), of the windowing control for the PMA/PMD in the upstream direction".

Cl **45**   *SC* **45.2.1.60b.4**   *P* **34**   *L* **7**   # 1531
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *CP enum*
We should agree on the DS CP enum

SuggestedRemedy

Move enum as is from editors note to Table 45–51b. Remove editors note.

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2.1.60b.4**   *P* **34**   *L* **8**   # 1472
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**

"These register bits indicate the size of the cyclic prefix control for the PMA/PMD in the downstream direction." should reference which register bits are meant

SuggestedRemedy

Change to "Register bits 1.111.3 through 1.111.0 indicate the size of the cyclic prefix control for the PMA/PMD in the downstream direction". Also, it would be important to indicate how individual values are encoded into these bits.
Insert the follwing text at the end of line 11: "The ssize of the cyclic prefix in the downstream direction is encoded into bits 1.111.3 through 1.111.0 as shown in Table 45-51bd."
Insert table per hajduczenia_3bn_04_0314.docx
Remove editors note on page 33, lines 12-17.

Similar changes need to be applied to 45.2.1.60c.3

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to:
"Register bits 1.111.3 through 1.111.0 indicate the size of the cyclic prefix control, in samples of the OFDM Clock (204.8 MHz), for the PMA/PMD in the downstream direction".

Change 45.2.1.60c.3 to read:
"Register bits 1.112.3 through 1.112.0 indicate the size of the cyclic prefix control, in samples of the OFDM Clock (204.8 MHz), for the PMA/PMD in the downstream direction".

Cl **45**   *SC* **45.2.1.60c.2**   *P* **34**   *L* **50**   # 1532
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *windowing enum*
We should agree on the US windowing size enum.

SuggestedRemedy

Move enum as is from editors note to Table 45–51c. Remove editors note.

Response   *Response Status* **C**

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 25 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.60c.2**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.60c.3**   *P* **35**   *L* **8**   # 1533
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *CP enum*
We should agree on the US CP enum.

SuggestedRemedy
Move enum as is from editors note to Table 45–51c. Remove editors note.

Response   *Response Status* **C**
ACCEPT IN PRINCIPLE.
See comment resolution from Cmt # 1305 against Draft 0.3.

Cl **45**   *SC* **45.2.1.60d**   *P* **35**   *L* **26**   # 1473
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**
Register 1.113 specifies the startign frequency, but does not describe (or reference to a description of) the width of the PHY-Link in downstream.

SuggestedRemedy
Add the register (sub-register) to describe the width of the PHY-link in downstream. The same applies to upstream PHY-link (see 45.2.1.60f)
Similar comment applies also to 45.2.1.60f (US PHY-Link control register)

Response   *Response Status* **C**
ACCEPT IN PRINCIPLE.
The width of the PHY-Link is fixed and does not need to be reflected in an MDIO register.
Add a reference to PHY Link physical layer (102.2.1 in D0.4)

Cl **45**   *SC* **45.2.1.60d**   *P* **35**   *L* **37**   # 1489
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *TDD remnants*
"DS PHY-Link starting sub-carrier from 0 to 4095 in steps of 1
Sub-carriers or Sub-carrier pairs." - it is not clear how to distinguish a dub-carrier from sub-carrir pairs, and even how sub-carrier paiers are used.

SuggestedRemedy
Remove "(or sub-carrier pair in the case of a
device operating with an FFT size of 8k)" in 45.2.1.60d.1, since 8k FFT is no more.
Remove all references to sub-carrier pairs as well.
Similar comment applies also to 45.2.1.60f (US PHY-Link control register)

Response   *Response Status* **C**
ACCEPT.

Cl **45**   *SC* **45.2.1.60d**   *P* **35**   *L* **37**   # 1543
Remein, Duane   Huawei Technologies

Comment Type **E**   *Comment Status* **A**   *TDD remnants*
Remnents of 8K fft ("sub-carrier pairs)

SuggestedRemedy
Remove all instances of sub-carrier pair and related text
There are 35 ln 44 & 38, pg 37 ln 19 & 13

Response   *Response Status* **C**
ACCEPT.

Cl **45**   *SC* **45.2.1.60d**   *P* **35**   *L* **37**   # 1602
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **D**
Per text at 102.2.1.1 pg 124 ln 30 "The DS_PLC_Start has a granularity of 1 MHz and determines the position of the PHY-Link in all DS OFDM channels in a multi-channel Phy".
The start position of all PHY Links in a multi channel system is identical.
Therefore we don't need the "#1" in register 1.113.11:0

SuggestedRemedy
Remove "#1" in table and related text.

Proposed Response   *Response Status* **Z**
REJECT.

This comment was WITHDRAWN by the commenter.

Cl **45**   *SC* **45.2.1.60e**   *P* **36**   *L* **1**   # 1490
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *PHY Link acquisition*
The relationship between register 1.113 and register set 1.114, 1.115. 1.116 is not clear at this time. In 1.114, 1.115. 1.116, we specift the start frequency, search step and other parameters. in 1.113 we specify some start subcarriers for PHY-Link.

SuggestedRemedy
Insert a drawing that represents the relationship between individual parameters included in registers 1.113/4/5/6.
It is not clear why 1.113 needs to be separate from 1.114, 1.115. 1.116, if they all cover DS PHY-Link channel definitions.

Response   *Response Status* **C**
ACCEPT IN PRINCIPLE.
Include description of use of parameters in these registers in Cl 102.4 and add ref here in CL 45. May need to create new section on PHY Link acquisition. Exact placement and wording left to Editor's discretion.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 26 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.60e**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

| *Cl* **45** | *SC* **45.2.1.60e** | *P* **36** | *L* **1** | # 1461 |

Hajduczenia, Marek — Bright House Network

Comment Type **E**   *Comment Status* **A**

Error in caption: "1.114, 1.115. 1.116" - "." should be replaced with ","

SuggestedRemedy

Change to "1.114, 1.115, 1.116"

Response   *Response Status* **C**

ACCEPT.

| *Cl* **45** | *SC* **45.2.1.60e** | *P* **36** | *L* **17** | # 1474 |

Hajduczenia, Marek — Bright House Network

Comment Type **T**   *Comment Status* **A**   *PHY Link term*

Terminology inconsistency: "PHY-Link" or "PLC Channel" ? I think we agreed on the PHY-Link, which is predominant in the draft today.

SuggestedRemedy

Replce all remaining instances of "PLC" and "PLC Channel" with "PHY-Link". Make sure capitalization is consistent across the draft.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to cmt 1547

| *Cl* **45** | *SC* **45.2.1.60e** | *P* **36** | *L* **29** | # 1475 |

Hajduczenia, Marek — Bright House Network

Comment Type **T**   *Comment Status* **A**

In definitions of individual registers in 45.2.1.60e, there are multiple statements "When this bit ..." or "When these bits ..." - typically, we reference register number

SuggestedRemedy

As an example, in 45.2.1.60e.1, change "When this bit is set to a one ... " to read "When set to a one, bit 1.114.14 ... "

Response   *Response Status* **C**

ACCEPT.

| *Cl* **45** | *SC* **45.2.1.60e.1** | *P* **36** | *L* **31** | # 1491 |

Hajduczenia, Marek — Bright House Network

Comment Type **TR**   *Comment Status* **A**   *PHY Link search*

Description of 1.114.14 is unclear: "Whenset to a zero by the PHY this bit indicates searching has completed, when set to a zero by the MDIO interface searching is disabled" - it is confusing as to what set the bit to zero and what it really means.

SuggestedRemedy

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See remein_3bn_12_0314.pdf for proposed text to be included here in Cl 45 and in 102.4.1.2 PHY Link acquisition (see response to cmt 1548 for proposed Cl 102 outline).
A comparison file between draft 0.4 and new material is provided in remein_3bn_13_0314.pdf

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| *Cl* **45** | *SC* **45.2.1.60e.2** | *P* **36** | *L* **36** | # 1492 |

Hajduczenia, Marek — Bright House Network

Comment Type **TR**   *Comment Status* **A**   *PHY Link acquisition*

Relationship between 1.114.13 and 1.114.14 is very unclear right now. For example, what value will 1.114.14 have when 1.114.13 becomes 1? Is it reset to 0 then?

SuggestedRemedy

Clarify how these two bits are used in conjunction, perhaps through description in Clause 102, or even better - in Clause 102 and Clause 45 together

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See Response to Cmt 1490

| *Cl* **45** | *SC* **45.2.1.60e.3** | *P* **36** | *L* **41** | # 1476 |

Hajduczenia, Marek — Bright House Network

Comment Type **T**   *Comment Status* **A**   *PHY Link search*

"These bits specify the frequency, in 1 MHz steps,at which to begin searching for a PHY-Link." - how are these bits encoded , i.e., where is MSB and where is LSB?

SuggestedRemedy

Similar question applies to 45.2.1.60e.4, 45.2.1.60e.3, and 45.2.1.60e.5.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to Cmt 1491

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

Cl **45**
SC **45.2.1.60e.3**

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Cl **45**   *SC* **45.2.1.60e.5**   *P* **36**   *L* **51**   *#* 1477

Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**   *PHY Link search*

The concept of "grid steps" is first used - it is not defined anywhere and how it is to be used, or what it really means

SuggestedRemedy

A clarification is needed as to what this grid really is and how it is used.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to Cmt 1491

Cl **45**   *SC* **45.2.1.60f**   *P* **37**   *L* **1**   *#* 1599

Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *Table 45-51f*

Register 116 appears to be assigned twice once for DS PLC Search Count (pg 36) and again here

SuggestedRemedy

Change:
45.2.1.60f 10GPASS-XR US PHY-Link control register (Register 1.116)
to:
45.2.1.60f 10GPASS-XR US PHY-Link control register (Register 1.117)
renumber subsequent registers as needed.

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2.1.60g**   *P* **37**   *L* **24**   *#* 1479

Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**   *Table 45-51g*

In 45.2.1.60g, we keep on repeating term "OFDM channel transmission", which does not make sense. We do not specify OFDM channel transmission, but OFDM channel

SuggestedRemedy

Replace all instance of "OFDM channel trasmission" with "OFDM channel"

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Replace "OFDM channel transmission"
with "OFDM channel"

Cl **45**   *SC* **45.2.1.60g**   *P* **37**   *L* **25**   *#* 1495

Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**

It seems that we will need the same register set for US direction as well, allowing to set the center frequencies for individual channels

SuggestedRemedy

Insert at least one register (starting at position 1.117n+1 and ending in 1.117n+1+k, where k is the number of upstream OFCM channels) follwing the structure of 45.2.1.60g

Response   *Response Status* **C**

ACCEPT.
See Comment #1493 (50kHz)

Cl **45**   *SC* **45.2.1.60g**   *P* **37**   *L* **41**   *#* 1600

Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *Table 45-51g*

Some errors in Table 45–51g

SuggestedRemedy

Bits should read:
1.118.15:0
1.119.15:0
1.118+N-1.15:0

Names in 2nd & 3rd row should read:
DS OFDM center freq ch2
DS OFDM center freq chN

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2.1.60g**   *P* **37**   *L* **41**   *#* 1478

Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**   *Table 45-51g*

Last entry in Table 45-51g has two entries "1.117.15:0" - the last entry should be "1.117+n.15:0" if we are to follow the numbering shown in caption of 45.2.1.60g

SuggestedRemedy

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to cmt 1600

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 28 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.60g**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.60g.1**   *P* **37**   *L* **50**   # 1480
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **A**   *Table 45-51g*

Definitions in 45.2.1.60g.1, 45.2.1.60g.2, and 45.2.1.60g.3 and onwards should be the
same, just changing the index of OFDM Channel. They are not the same right now.

SuggestedRemedy

align definitions of registers 45.2.1.60g.1, 45.2.1.60g.2, and 45.2.1.60g.3 so they are the
same and look and feel the same.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Align to 42.2.1.60g.1 as changed in cmt 1493

Cl **45**   *SC* **45.2.1.60g.1**   *P* **37**   *L* **52**   # 1494
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *Table 45-51g*

Precision of units is not consistent in text: "These bits specify the center frequency, in
steps of 65,536 Hz, of sub-carrier 0 of the first OFDM channel transmission. Since sub-
carrier 0 is always excluded, it will actually be below the allowed downstream spec trum
band. This definition equates to a center frequency from 0 to 4.29 GHz in 65.54 kHz
steps."
First, we use 65,536 Hz (unit is Hz) and then switch to kHz and drop down precision to 2
decimal points losing last digit

SuggestedRemedy

Use consistent resolution of the unit, i.e., wither in Hz or in KHz, depending on which one is
appropriate.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to cmt 1493

Cl **45**   *SC* **45.2.1.60g.1**   *P* **37**   *L* **52**   # 1493
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *Table 45-51g*

"the center frequency, in steps of 65,536 Hz, of sub-carrier 0 of the first OFDM channel
transmission" - what does it really mean? Does this define the lower edge of the center or
what? It is not clear what the step is (65kHz or something else) and what teh subcarrier
numbering has to do with it

SuggestedRemedy

Clarify (at best through a drawing) what this parameter is really reflecting relative to other
parameters of the channel (width, size, subcarriers, etc.).
Also, in this context it is unclear what this really means: "Since sub-carrier 0 is always
excluded, it will actually be below the allowed downstream spectrum band." - when did we
agree that subcarrier 0 is in the middle of the channel and that it is excluded ?

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to read:
"Register bit (1.118.15:0) specify the center frequency, in steps of 50 kHz, of sub-carrier 0
of the first OFDM channel. Sub-carriers are numbered from 0 to 4095 with sub-carrier 0 at
the lowest frequency. Since sub-carrier 0 is always excluded, it will actually be below the
allowed downstream spectrum band. This definition equates to a center frequency from
TBD to 3.27675 GHz in 50 kHz steps. The minimum value for this register is TBD."
Also see cmt 1600

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 29 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.1.60g.1**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.1.60g.3**   *P* **38**   *L* **12**   # 1583
Remein, Duane   Huawei Technologies

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

The statement below (pg 101 ln 49) implies an mdio register.
"The behavior of the FEC decoder in the presence of CRC40 code failure depends on status of the user-configurable option to indicate an uncorrectable FEC codeword."
Also see pg 102 ln 5

SuggestedRemedy

Add the following just prior to "Insert 45.2.7a after the last paragraph in 45.2.7.14... "
Add placeholder for para "45.2.3 PCS registers "
"EDITORS NOTE (to be removed prior to publication); the following statements from draft 0.4 101.3.6.1.2 LDPC decoding process within CNU (downstream) imply an mdio register that has yet to be defined."
(from pg 101 ln 49) "The behavior of the FEC decoder in the presence of CRC40 code failure depends on status of the user-configurable option to indicate an uncorrectable FEC codeword."
(from pg 102 ln 5) "The FEC decoder in the CNU shall provide a user-configurable option to indicate an uncorrectable FEC
codeword (due to an excess of symbols containing errors) to higher layers. If this user-configurable option is enabled and the calculated value of CRC40 does not match the value of CRC40 retrieved from the received FEC codeword, the FEC decoder replaces bit <0> and <1> in the sync headers in all BQ blocks with the binary value of "11". If this user-configurable option is disabled, the FEC decoder does not make any further changes to the sync headers in all BQ blocks."

Proposed Response   *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **45**   *SC* **45.2.1.8**   *P* **29**   *L* **1**   # 1486
Hajduczenia, Marek   Bright House Network

Comment Type **TR**   *Comment Status* **A**   *Table 45-8*

Register 1.9 does not require aby changes

SuggestedRemedy

we do not have PMD lanes defined at this time and it is not likely these will be added (no propoals have been made so far). Remove 45.2.1.8 and 45.2.1.8.1. Material should be included when and if needed, and not just in case.

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2.1.8**   *P* **29**   *L* **1**   # 1459
Hajduczenia, Marek   Bright House Network

Comment Type **E**   *Comment Status* **A**

Garbage in title of 45.2.1.8

SuggestedRemedy

Remove ":" at the beginning

Response   *Response Status* **C**

ACCEPT.

Cl **45**   *SC* **45.2.1.8**   *P* **29**   *L* **8**   # 1529
Remein, Duane   Huawei Technologies

Comment Type **T**   *Comment Status* **A**   *Table 45-8*

Table 45–8—PMD transmit disable register bit definitions Table number is incorrect

SuggestedRemedy

Change Table 45-8 to Table 45-11

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Table is removed in cmt 1486

Cl **45**   *SC* **45.2.7a.1**   *P* **38**   *L* **17**   # 1481
Hajduczenia, Marek   Bright House Network

Comment Type **T**   *Comment Status* **R**

Structure of register show in table Table 45–191a is very confusing.

SuggestedRemedy

12.0.15:12 should cover sub-carrier 0, 12.0.11:8 - sub-carrier 1 and so on. Right now one has to read from the bottom of the tabel to the top, which is reversed.
Also, mapping of individual bits into specific modulation formats should be defined through an external table - see hajduczenia_3bn_02_0314, hajduczenia_3bn_03_0314, or hajduczenia_3bn_04_0314 for examples of such definitions

Response   *Response Status* **C**

REJECT.
Seems more logical that the low order SC goes with the low order bits in the register not the other way around.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 30 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.7a.1**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.7a.1**   *P* **38**   *L* **17**   # 1499

Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **A**

At this time, we have only DS OFDM channel descriptors. Similar control registers will be needed for US as well.

SuggestedRemedy

Add US OFDM channel descriptor register structure as outlined in hajduczenia_3bn_05_0314 for DS OFDM channel.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Copy Clause 45.2.7a.1 making the appropriate changes to change the DS descriptor to an US descriptor (generally replace "DS" with "US" and update register numbers from "12.0" to "12.1024", "12.1" to "12.1025", etc.

No need to obfuscate the number or registers with mathematical formulas. The last register is 12.2047.15:12 (assuming an FFT size of 4k).

At some point when we know the number of DS & US channels we can decide to consolidate DS in a contiguous space if that is deemed important.

Cl **45**   *SC* **45.2.7a.1**   *P* **38**   *L* **17**   # 1498

Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **R**

The current register structure does not represent correctly how OFDM channels 2 through n are covered in this register structure. At this time, it covers only 4096 subcarriers per OFDM channel.

SuggestedRemedy

Implement changes per hajduczenia_3bn_05_0314. Once the number of subcarriers per channel is established, and the size of individual channel descriptor, formulas can be simplified and numeric values rather than formulas can be used.

Response   *Response Status*   **C**

REJECT.

The number of sub-carriers per OFDM channel is known (4096). All sub-carriers need to be specified, therefore table size is known.

Cl **45**   *SC* **45.2.7a.1**   *P* **38**   *L* **36**   # 1497

Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **A**   *Mod type enum*

Unclear definitions included in Table 45–191a. What does it mean:
0000 = null - no data is being transmitted? What purpose does it serve?
0001 = BPSK and 0010 = QPSK were never discussed and never proposed for EPoC
Other values that were neither discussed nor approved need to be also pulled out from this register.

SuggestedRemedy

Remove all values that are not intended to be used for downstream. Leave 8k QAM and 16k QAM - the rest is not intended to be used in downstream anyway (no approved decision) so why do we even bother storing them in registers?

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
In principle it is agree that this enumeration needs additional work. However, at this time, it is not known precisely how to modify it.
Add editors note
"EDITORS NOTE (to be removed prior to publication); PHY experts are requested to supply any necessary modifications to the DS Modulation Type enumeration with attendant justifications."

Cl **45**   *SC* **45.2.7a.1**   *P* **38**   *L* **40**   # 1496

Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **A**   *Mod type enum*

What does it mean "0011 = 8-QAM(support optional)" - it implies that support for 8-QAM in teh given PHY is optional (if so, such statements ought to part of PMD clause, and not indicated in register) or that support for this register setting is optional (in this case, 0011 combination woudl not be tested for mandatory compliance)

SuggestedRemedy

Statements about PHY support for specific modulation formats (mandatory and operation) need to be made in PMD clause

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Remove all parenthetical statements about use and optional/required.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 31 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **45.2.7a.1**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.7a.1**   *P* **38**   *L* **45**   # 1534
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**
Here is a minor typo. On table 45-191a: 1001 = 12QAM should be 1001=512QAM.

SuggestedRemedy
cHANG E12qam TO 512QAM

Response   *Response Status*   **C**
ACCEPT.

Cl **56**   *SC* **56.1**   *P* **43**   *L* **15**   # 1544
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
coax distribution network neq CCDN

SuggestedRemedy
Replace "coax distribution network" with "Coax Cable Distribution Network" as defined in Cl 1.5

Response   *Response Status*   **C**
ACCEPT.

Cl **56**   *SC* **56.1**   *P* **43**   *L* **17**   # 1545
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**
coaxial PMD? are the PMD's really coaxial?

SuggestedRemedy
Change "coaxial PMD" to "EPoC PMD"

Response   *Response Status*   **C**
ACCEPT.
Type was changed to "T" - this is not typo we're fixing.

Cl **56**   *SC* **56.1**   *P* **43**   *L* **34**   # 1462
Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **A**
"The EFM architecture is further extended in Clause 100,
Clause 101, and Clause 102 by the addition of EPoC" - missing reference to Clause 103

SuggestedRemedy
Change to "The EFM architecture is further extended in Clause 100,
Clause 101, Clause 102, and Clause 103 by the addition of EPoC"

Response   *Response Status*   **C**
ACCEPT.

Cl **56**   *SC* **56.1**   *P* **43**   *L* **35**   # 1553
Remein, Duane   Huawei Technologies

Comment Type   **ER**   *Comment Status*   **A**
"The EFM architecture is further extended in Clause 100,
Clause 101, and Clause 102 by the addition of EPoC." missing Clause 103

SuggestedRemedy
Add ref to Clause 103

Response   *Response Status*   **C**
ACCEPT IN PRINCIPLE.
Solved in #1462

Cl **56**   *SC* **56.1**   *P* **43**   *L* **37**   # 1482
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**
EPoC EFM architecture drawing is missing

SuggestedRemedy
Insert figure per hajduczenia_3bn_06_0314. Link to new Figure 56-4a in text: "and Figure
56-X for EPoC topologies" on page 43, line 25, and remove editors' note on page 43, line
37.
Also, create live cross-reference to newly inserted figure on page 44, line 13

Response   *Response Status*   **C**
ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **56**   Page 32 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **56.1**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **56**   *SC* **56.1.2**   *P* **43**   *L* **42**   # 1535
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**
Unlike optical networks which work at a single bit rate EPoC network do not have a "nominal" bit rate.

SuggestedRemedy
Change:
"operating with a nominal bit rate of up to TBD Mb/s in the downstream direction and up to TBD Mb/s in the upstream direction"
to read:
operating with a bit rate of between TBD and TBD Mb/s in the downstream direction and betwteen TBD and TBD Mb/s and in the upstream direction"

Response   *Response Status*   **C**
ACCEPT IN PRINCIPLE.

Change:
"operating with a nominal bit rate of up to TBD Mb/s in the downstream direction and up to TBD Mb/s in the upstream direction"
to read:
"operating with a bit rate of up to 10 Gb/s in the downstream direction and up to 10 Gb/s in the upstream direction"

Cl **56**   *SC* **56.1.2**   *P* **43**   *L* **42**   # 1483
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**
TBDs can be numerated per our existing objectives

SuggestedRemedy
Change text on page 43, lines 42 and 43 to read: "For P2MP coaxial topologies, EFM supports EPoC operating with a nominal bit rate of up to 10 Gb/s in the downstream direction and up to 10 Gb/s in the upstream direction."

Response   *Response Status*   **C**
ACCEPT IN PRINCIPLE.

See #1535

Cl **56**   *SC* **56.1.2.1**   *P* **44**   *L* **10**   # 1546
Remein, Duane   Huawei Technologies

Comment Type   **E**   *Comment Status*   **A**
Incorrect reference to Cl 102

SuggestedRemedy
Change to Cl 103

Response   *Response Status*   **C**
ACCEPT.

Cl **56**   *SC* **56.1.2.2**   *P* **44**   *L* **35**   # 1537
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **D**
Unless I am mistaken Coax links can be considered copper links which make the following statement incorrect "EFM Copper links use the MII of Clause 22 operating at 100 Mb/s."

SuggestedRemedy
Change to:
"EFM twisted pair Copper links use the MII of Clause 22 operating at 100 Mb/s."

Proposed Response   *Response Status*   **Z**
REJECT.

This comment was WITHDRAWN by the commenter.

This is a larger issue - fixing it in this one location does not solve the problem. The one possible (and suggested) solution would be to submit an MR to qualify "copper" links in EFM to make sure it is not ambiguous in the context. At this time, suggest to leave the text as is, and make a chance through MR.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn
SORT ORDER: Clause, Subclause, page, line   *Cl* **56**   Page 33 of 37
SC **56.1.2.2**   3/19/2014 4:56:04 AM

Cl **56**   *SC* **56.1.3**   *P* **44**   *L* **41**   # 1538

Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

We can clear the TBD in the following para and remove the "combinations" as there is only
one option at this point fro the following paras:
"Moreover, EFM introduces a family of Physical Layer signaling systems which are derived
from
10GBASE-R, but which include RS, PCS, and PMA sublayers adapted for EPoC, along
with a mandatory
FEC capability, as defined in Clause 101. All of these systems employ the PMD defined in
Clause 100. The
family of P2MP Physical Layer signaling systems utilizes TBD signaling for the
downstream and upstream
directions in the following series of PMD combinations:
a) TBD
All EPoC PMDs are defined in Clause 100."

SuggestedRemedy

Change to:
"Moreover, EFM introduces a family of Physical Layer signaling systems which are derived
from 10GBASE-R, but which include RS, PCS, and PMA sublayers adapted for EPoC,
along with a mandatory FEC capability, as defined in Clause 101. This system employs the
PMD defined in Clause 100. The P2MP Physical Layer signaling system utilizes 10GPASS-
XR signaling for the downstream and upstream
directions.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

We are adding just one system at this time . it is also not clear to me that we really use
10GPASS-XR signalling and what is so special. We do not add new codes into 64B/66B or
anything like that.

Change to:
"Moreover, EFM introduces a Physical Layer signaling system derived from 10GBASE-R,
but which includes RS, PCS, and PMA sublayers adapted for EPoC, along with a
mandatory FEC capability, as defined in Clause 101. This system employs the PMD
defined in Clause 100. EPoC uses a PHY Link for physical layer signaling as defined in
Clause 102."

Cl **56**   *SC* **56.1.3**   *P* **46**   *L* **10**   # 1484

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

Table 56-1 contains reference to CCDN as medium. It is not correct - medium for PON is
"One single-mode fiber PON". For EPoC, it would be a specific type of coaxial cable.

SuggestedRemedy

Change "CCDN" to "One coaxial cable, type TDB, comprising CCDN"

Response   *Response Status*   **C**

ACCEPT.
Change to:
"One coaxial cable connected to a CCDN"

Cl **56**   *SC* **56.1.3**   *P* **46**   *L* **10**   # 1463

Hajduczenia, Marek   Bright House Network

Comment Type   **E**   *Comment Status*   **A**

Reference to Clause 100 in line 10 and 12 is dead. Make sure it is fixed.

SuggestedRemedy

Response   *Response Status*   **C**

ACCEPT.

Cl **56**   *SC* **56.1.3**   *P* **46**   *L* **23**   # 1485

Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

Table 56-3 does not contain reference to PHY-Link in Clause 102.

SuggestedRemedy

Add a new column to Table 56-3 with the following heading: "EPoC PHY-Link" with
reference to 102. Insert "M" for 10GBASE-XR PHY.
Change reference to EPoC P2MP MPMC from 102 to 103.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Add a new column to Table 56-3 with the following heading: "EPoC PHY Link" with
reference to 102. Insert "M" for 10GBASE-XR PHY.
Change reference to EPoC P2MP MPCP from 102 to 103.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **56**   Page 34 of 37
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed Z/withdrawn   *SC* **56.1.3**   3/19/2014 4:56:04 AM
SORT ORDER: Clause, Subclause, page, line

Cl **56**   *SC* **56.1.3**   *P* **46**   *L* **26**   # 1539
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

Various fixed in Table 56-3
Reference to CLause 102 in Tabels 56-3 is incorrect
No reference to PHY-LInk clause
Also we're not defining a 10GBASE anything.

SuggestedRemedy

Change last row 1st col, and header row to read "10GPASS-XR" not 10GBASE-XR
Change EPoC P2MP MPMC ref to 103
Add column for EPoC PHY-Link Ref clause 102 "EPoC PHY-Link", "M" for 10GPASS-XR

Response   *Response Status*   **C**

ACCEPT.
See comment 1485

Cl **56**   *SC* **56.1.5**   *P* **47**   *L* **29**   # 1540
Remein, Duane   Huawei Technologies

Comment Type   **T**   *Comment Status*   **A**

The following statement is incorrect "It is necessary for a 1000BASE-PX-D OLT or CLT to
do this to bring an PONODN or CCDN into operation (although it is highly inadvisable for a
1000BASE-PX-U ONU or CNU to transmit without receiving)."
A CLT does not use 10000BASE=PRX-D nor are OLT's restricted to this PMD.
Note that EPoC CNU are not permitted to transmit without prior reception (normative).

SuggestedRemedy

Change to:
"It is necessary for an EPON OLT or EPoC CLT to do this to bring an PONODN or CCDN
into operation (although it is highly inadvisable for an EPON ONU to transmit without
receiving). However, an EPoC CNU is forbidden from transmitring without first receiving a
satisfactory signal (see 102.4)."

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Text is techncially correct, though proper PMD designations are needed

Change "1000BASE-PX-D OLT or CLT" to "EPON OLT or EPoC CLT"

Change "1000BASE-PX-U ONU or CNU" to "EPON ONU or EPoC CNU"

Change "PONODN" to "PON ODN"

Cl **67**   *SC* **67.1**   *P* **51**   *L* **27**   # 1559
Remein, Duane   Huawei Technologies

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

Various fixed to table 67-1
Location of the footnote reference (d) seems misplaced. for optical P2MP segments the
complementary note is in colunm Number of PHYs"
Nominal reach (km) is not applicable.

SuggestedRemedy

Move footnote callout to 3rd column (after TBD) in two places.
Chang ethe two "TBD" in last column last two rows to "N/A"

Proposed Response   *Response Status*   **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

See #1509

Cl **67**   *SC* **67.1**   *P* **51**   *L* **27**   # 1509
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

Optical and copper PHYs that are part of EFM were always designed around a specific
power budget, which implied specific distance over reference media and number of
connected stations. EPoC is not being currently designed around the same principle.

SuggestedRemedy

Replace "TBD" for EPoC in Table 67-1 with "N/A" in 4 locations. Number of
PHYs per segment is not limited by power budget (we do not have one) and Nominal reach
(km) is not specified either.
Also, replace "TBD Mb/s" with "up to 10 Gb/s" in two locations.
Remove footnote d) under the table and its anchor point.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.

Leave the 4 "TBD"s

Replace "TBD Mb/s" with "up to 10 Gb/s" in two locations.
Remove footnote d) under the table and its anchor point.

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

Cl **67**
SC **67.1**

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Cl **67** *SC* **67.2.1a** *P* **52** *L* **1** # 1510
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **A**

The section "Trade off between link span and split ratiofor P2MP EPoC architecture" does not make much sense as we do not specify target distance or power buget for EPoC, hence there is no trade off to be done here. Additionally, CCDN can be active, so distance and power budget are really ill defined.

SuggestedRemedy

Remove whole subclause 67.2.1a

Response *Response Status* **C**

ACCEPT.

Cl **67** *SC* **67.2.3a** *P* **53** *L* **1** # 1511
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **R**

Content of subclause 67.2.3a is currently missing

SuggestedRemedy

Suggest to revise 67.2.3a as shown in hajduczenia_3bn_07_0314

Response *Response Status* **C**

REJECT.
The proposed figure does not clarify "typical" CCDN. The general consensus at this point is that a representative figure cannot accurately capture the details necessary to generalize typical CCDN archcitecture.

Cl **67** *SC* **67.2.4** *P* **53** *L* **5** # 1501
Hajduczenia, Marek Bright House Network

Comment Type **E** *Comment Status* **A**

Subclause 67.2.4 contains no changes.

SuggestedRemedy

Remove 67.2.4

Response *Response Status* **C**

ACCEPT.

Cl **67** *SC* **67.2.4** *P* **53** *L* **5** # 1552
Remein, Duane Huawei Technologies

Comment Type **E** *Comment Status* **A**

No changes are proposed to this section. it should be removed

SuggestedRemedy

Remove 67.2.4 Interoperability between certain 1000BASE-PX10 and 1000BASE-PX20 in it's entirety, it is unlikely we will change this.

Response *Response Status* **C**

ACCEPT.
See #1501

Cl **67** *SC* **67.3** *P* **53** *L* **15** # 1512
Hajduczenia, Marek Bright House Network

Comment Type **T** *Comment Status* **R**

Per Editor's Note, Figure 67-3 needs to be revised.

SuggestedRemedy

Remove editor's note on page 53, lines 15-16 and implement replace Figure 67-3 with figure shown in hajduczenia_3bn_08_0314

Response *Response Status* **C**

REJECT.
The task Force does not see a need to extend this figure to include EPoC.

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

Cl **67**
SC **67.3**

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Cl **67**   *SC* **67.6.1**   *P* **53**   *L* **46**   # 1515
Hajduczenia, Marek   Bright House Network

Comment Type   **TR**   *Comment Status*   **A**

Given the properties of OFDM transmission, a unidirectional transmission in EPoC should be limited to downstream direction only. In upstream, an unscheduled transmission from a single CNU will wipe out transmissions from other CNU and will not be received correctly. It should not be allowed.

SuggestedRemedy

Add a sentence (with underline) at the end of 67.6.1:
The feature shall not be enabled for 10GBASE-XR-U PHYs in service, to avoid simultaneous and unscheduled transmission by more than one CNU. This feature may be used for 10GBASE-XR-D PHYs without any negative consequences on downstream transmission.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Change last sentence from
"The feature should not be enabled for 1000BASE-PX-U PHYs in service, to avoid simultaneous transmission by more than one ONU."
to:
"The feature should not be enabled for 1000BASE-PX-U or 10GPASS-XR PHYs in service, to avoid simultaneous transmission by more than one ONU or CNU."

Cl **67**   *SC* **67.6.2**   *P* **54**   *L* **6**   # 1502
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

No changes will be needed here for EPoC - we follow the same approach as done in EPON.

SuggestedRemedy

Remove 67.6.2 from the draft

Response   *Response Status*   **C**

ACCEPT.

Cl **67**   *SC* **67.6.3**   *P* **67**   *L* **20**   # 1503
Hajduczenia, Marek   Bright House Network

Comment Type   **T**   *Comment Status*   **A**

All revisions neede for EPoC are already done in 67.6.3.

SuggestedRemedy

Remove the editorial note in lines 20/21 - no further changes to this subclause are needed for EPoC.

Response   *Response Status*   **C**

ACCEPT IN PRINCIPLE.
Update reference to Cl 103

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

Cl **67**
SC **67.6.3**

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