

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl **FM** SC P1 L27 # 275
 Marris, Arthur Cadence Design Systems
 Comment Type **ER** Comment Status **X**
 802.3cd is published.
 On page 10 the description of what this amendment does is missing.
 SuggestedRemedy
 Change 802.3cd-201x to 802.3cd-2018 here and on page 10
 Also change "IEEE Std 802.3-201x" to "IEEE Std 802.3-2018" throughout the document.
 Also on page 10 replace "This amendment includes [complete]" with appropriate text.
 Proposed Response Response Status

Cl **FM** SC **FM** P1 L27 # 279
 Wienckowski, Natalie General Motors
 Comment Type **E** Comment Status **X**
 802.3cd has been published
 SuggestedRemedy
 Change: 802.3cd-201x
 To: 802.3cd-2018
 Also on P10 L43.
 Proposed Response Response Status

Cl **FM** SC **FM** P9 L5 # 436
 Powell, William Nokia
 Comment Type **TR** Comment Status **X**
 Current text still refers to 100 Gb/s EPON:
 This introduction is not part of IEEE P802.3ca, IEEE Draft Standard for Ethernet.
 Amendment: Physical Layer Specifications and Management Parameters for 25 Gb/s, 50 Gb/s, and 100 Gb/s Passive Optical Networks.
 SuggestedRemedy
 Change to:
 This introduction is not part of IEEE P802.3ca, IEEE Draft Standard for Ethernet.
 Amendment: Physical Layer Specifications and Management Parameters for 25 Gb/s and 50 Gb/s Passive Optical Networks.
 Proposed Response Response Status

Cl **FM** SC **FM** P10 L31 # 280
 Wienckowski, Natalie General Motors
 Comment Type **E** Comment Status **X**
 802.3-2018 has been published
 SuggestedRemedy
 Change: 802.3-201x
 To: 802.3-2018
 Also on P10 L37 & P10 L45.
 Proposed Response Response Status

Cl **FM** SC **FM** P10 L38 # 282
 Wienckowski, Natalie General Motors
 Comment Type **E** Comment Status **X**
 802.3bt also added Annex 145C.
 SuggestedRemedy
 Change: Annex 145A, and Annex 145B.
 To: Annex 145A, Annex 145B, and Annex 145C.
 Proposed Response Response Status

Cl **FM** SC **FM** P10 L49 # 59
 Zimmerman, George CME Consulting/ADI, APL Gp, Aquantia, BMW, Cisco
 Comment Type **E** Comment Status **X**
 802.3cg, 802.3cn, 802.3cq amendments before this are all missing, as well as the description of 802.3ca - It would be REALLY helpful to see what 802.3ca is intending to put into the standard....
 SuggestedRemedy
 Copy 802.3cg, 802.3cm, 802.3cn, and 802.3cq descriptions from 802.3cn D2p1, and fill in a description for 802.3ca.
 Proposed Response Response Status

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Cl FM *SC FM* *P10* *L50* #

Anslow, Pete Ciena

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

The summary text for IEEE Std 802.3ca-20xx is missing

SuggestedRemedy

Add suitable summary text

Proposed Response *Response Status*

Cl FM *SC FM* *P20* *L46* #

Anslow, Pete Ciena

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

The TOC entries for Annex 31A and Annex 142A are mixed together and they both say (normative).

SuggestedRemedy

Fix the TOC

Proposed Response *Response Status*

Cl FM *SC FM* *P10* *L52* #

Wienckowski, Natalie General Motors

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

Need to add a description of this ammendment

SuggestedRemedy

Change: This amendment includes [complete]
 To: This amendment includes changes to IEEE Std 802.3-2018 and adds Clause 141 through Clause 144 and Annex 142A. This amendment extends the operation of Ethernet Passive Optical Networks (EPONs) to multiple channels of 25 Gb/s providing both symmetric and asymmetric operation for the following data rates (downstream/upstream): 25/10 Gb/s, 25/25 Gb/s, 50/10 Gb/s, 50/25 Gb/s, and 50/50 Gb/s. This standard specifies the 25 Gb/s EPON Multi-Channel Reconciliation Sublayer (MCRS), 25GBASE-PQ Physical Coding Sublayers (PCSs), Physical Media Attachments (PMAs), and Physical Medium Dependent sublayers (PMDs) that support both symmetric and asymmetric data rates while maintaining complete backward compatibility with already deployed 10 Gb/s EPON equipment. Backward compatibility with deployed 1G-EPON and ITU-T G.984 GPON is maintained with 25GBASE-PQ for the specific case of 1G-EPON and GPON ONUs using reduced-band (40 nm) lasers. The EPON operation is defined for distances of at least 20 km, and for a split ratio of at least 1:32.

Proposed Response *Response Status*

Cl 00 SC 0 P L # 63

Zimmerman, George CME Consulting/ADI, APL Gp, Aquantia, BMW, Cisco

Comment Type E Comment Status X

PICS Item PQG2510D2F3 value/comment implies that the requirement is labeling. There is no mention of labeling in the requirement itself (note c of Table 141-15). The requirement is a strict 'shall be able to tolerate without damage'. The PICS says the receiver either shall be able to tolerate, OR shall be labeled that it may be damaged. Also, this PICS item is a duplicate of PQG2510D2F2, because that PICS item includes ALL of the receiver requirements in the Table (and the damage requirement is one), so if the requirement allows labeling, the damage threshold needs to be removed from the table.

As best I can tell, IEEE Std 802.3 2018 handles these damage requirements both ways - either excepting with a label, or simply meeting the requirement.

The dominant way appears to be that the requirement is to tolerate the level specified (Clauses 88, 89, 95, 114, 115, 121, 122, and 124 follow this model, see, e.g., PICS 88.12.4.3, or Table 124-7 and PICS 124.12.4.3)

However, Clauses 60 and 75 specify that the requirement may be met, OR the PMD may be labeled. In this case, the requirement to withstand damage is actually to either meet the level OR label appropriately.

The same comment applies to ALL the PMD receiver damage threshold PICS.

SuggestedRemedy

Depending on the intent (see comment):
Either delete the PICS for the damage threshold.

OR:

strip the damage threshold out of the table into the normative text, and rewrite the requirement in the normative text (in 141.5.2) as such. See, 60.6.2, 75.4.2, 75.5.2 for example text:

"Either the damage threshold of XXX shall be met, or, the receiver shall be labeled to indicate the maximum optical input power level to which it can be continuously exposed without damage."

(where XXX either specifies the separate table with the damage threshold or just puts the level inline in the text - whichever is more straightforward).

(same remedy applies to other receiver damage threshold PICS).

Proposed Response Response Status O

Cl 00 SC 0 P0 L0 # 466

Thompson, Geoff GraCaSI S.A./Independent

Comment Type ER Comment Status X

In all illustrations of the ISO Reference Model, the right end of the Layer dividing line between MAC and Physical Layer is imprecisely placed.

SuggestedRemedy

Place right end of the dashed line precisely at the upper left corner of the MCRS box in all instances.

Proposed Response Response Status O

Cl 00 SC 0 P0 L0 # 467

Thompson, Geoff GraCaSI S.A./Independent

Comment Type ER Comment Status X

In all illustrations of the ISO Reference Model, the right end of the Layer dividing line between Data Link and Network Layer is imprecisely placed.

SuggestedRemedy

Place right end of the dashed line precisely at the upper left corner of the MPMC CLIENT box in all instances.

Proposed Response Response Status O

Cl 00 SC 0 P10 L49 # 58

Maguire, Valerie The Siemon Company

Comment Type E Comment Status X

Information for Amendment 4: 802.3cg is missing.

SuggestedRemedy

Insert, "IEEE Std 802.3cg™-20xx Amendment 4—This amendment includes changes to IEEE Std 802.3-2018 and adds Clause 146 through Clause 148 and Annex 146A and Annex 146B. This amendment adds 10 Mb/s Physical Layer specifications and management parameters for operation over a single balanced pair of conductors."

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 00 SC 0 P21 L46 # 429
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 This is too out of date: "other IEEE 802.3 amendment projects running in parallel (e.g., IEEE P802.3bj and IEEE P802.3bk)"
 SuggestedRemedy
 Use an up-to-date example, refer to template maintainer to update if not already done
 Proposed Response Response Status O

Cl 1 SC 1.3 P22 L15 # 67
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 IEC references in the in-force standard have an em dash in front of "Part" with no spaces on either side. This is also true for other "-" separators in the title.
 SuggestedRemedy
 For the IEC reference being added replace " - " before "Performance", "Part", and "Uncontrolled" with an em dash with no spaces before and after.
 Proposed Response Response Status O

Cl 1 SC 1.3 P22 L8 # 430
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 According to https://www.itu.int/itu-t/workprog/wp_item.aspx?isn=13348 , G.652-2016 has removed G.652.A and G.652.C, leaving B and D. Yet several clauses will work with A or C; we should not give an impression that they don't.
 SuggestedRemedy
 Choose whether you want to include types A and C for the new PMDs. If you do, add a new reference to G.652-2016, leaving G.652-2009 in place. If you don't, it may be simplest to continue with G.652-2009, which remains available.
 Proposed Response Response Status O

Cl 1 SC 1.3 P22 L13 # 66
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 IEEE references in the in-force standard do not have a date at the end of the title
 SuggestedRemedy
 Delete ", 24 July 2017"
 Proposed Response Response Status O

Cl 1 SC 1.4 P22 L24 # 68

Anslow, Pete

Ciena

Comment Type E Comment Status X

The sorting order for definitions in 1.4 is defined at:
http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html#sort
 This order has not been correctly applied to the P802.3ca draft.
 Also, definitions are usually presented in subclause order in amendments.

SuggestedRemedy

In 1.4, change the editing instructions and definition numbering as follows:
 Insert the following new definitions after 1.4.90 "200GXS":
 1.4.90a 25/10G-EPON: ...
 1.4.90b 25/25G-EPON: ...
 Insert the following new definition after 1.4.100 "25GBASE-T":
 1.4.100a 25G-EPON: ...
 Insert the following new definitions before 1.4.128aa "50GBASE-CR" as inserted by IEEE Std 802.3cd-2018:
 1.4.128aaa 50/10G-EPON: ...
 1.4.128aab 50/25G-EPON: ...
 1.4.128aac 50/50G-EPON: ...
 Insert the following new definition after 1.4.128ah "50 Gb/s Media Independent Interface (50GMII)" as inserted by IEEE Std 802.3cd-2018:
 1.4.128ai 50G-EPON: ...
 Insert the following new definitions after 1.4.244 "Energy-Efficient Ethernet (EEE)":
 1.4.244a envelope: ...
 1.4.244b envelope allocation: ...
 1.4.244c envelope descriptor: ...
 Insert the following new definitions after 1.4.245 "envelope frame":
 1.4.245a envelope header: ...
 1.4.245b envelope quantum: ...
 1.4.245c EQT: ...
 Insert the following new definition after 1.4.277 "Gigabit Media Independent Interface (GMII)":
 1.4.277a GPON: ...
 Change 1.4.278 as follows:
 1.4.278 Grant: ...
 Change 1.4.312 (re-numbered from 1.4.313 due to the deletion of 1.4.294 by IEEE Std 802.3bt-2018) as follows:
 1.4.312 Logical Link Identifier (LLID): ...
 Insert new definition for "MCRS channel" after 1.4.319 "maximum differential input" (re-numbered from 1.4.320 due to the deletion of 1.4.294 by IEEE Std 802.3bt-2018) as follows:
 1.4.319a MCRS channel: ...
 Insert new definition for "Nx25G-EPON" after 1.4.350 "NRZI" (re-numbered from 1.4.351 due to the deletion of 1.4.294 by IEEE Std 802.3bt-2018) as follows:

Proposed Response Response Status O

Cl 1 SC 1.4.90a P22 L45 # 432

Dawe, Piers

Mellanox

Comment Type E Comment Status X

the maximum sustained throughput

SuggestedRemedy

a maximum sustained throughput (several times)

Proposed Response Response Status O

Cl 1 SC 1.4.244a P23 L18 # 459

Thompson, Geoff

GraCaSI S.A./Independent

Comment Type ER Comment Status X

I believe that this is the first use of the term "envelope" in this context. Please refer to it as a "timing envelope" to distinguish it from an envelope frame.

SuggestedRemedy

Change the following text: "In the Multi-Channel Reconciliation Sublayer (MCRS, see Clause 143), an envelope encapsulates data belonging to a specific LLID being transmitted on a specific MCRS channel," TO READ: "In the Multi-Channel Reconciliation Sublayer (MCRS, see Clause 143), a timing envelope encompasses data belonging to a specific LLID being transmitted on a specific MCRS channel,"

Proposed Response Response Status O

Cl 1 SC 1.4.244b P23 L22 # 460

Thompson, Geoff

GraCaSI S.A./Independent

Comment Type ER Comment Status X

Per the previous comment, the general term "envelope" is already used elsewhere in 802.3. This will be a cause for confusion.

SuggestedRemedy

Please refer to the PON use at this level as a "timing envelope" to distinguish it from other uses of the term envelope. The change is needed here and many places elsewhere throughout your draft. Please do a global search and examine each use of the term "envelope" for possible modification.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 1 SC 1.4.244b P23 L23 # 28
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "A single GATE MPCPDU can carry up" to "A single GATE MPCPDU may carry up"
 Proposed Response Response Status O

Cl 1 SC 1.4.244c P23 L26 # 461
 Thompson, Geoff GraCaSI S.A./Independent
 Comment Type TR Comment Status X
 The parameters to not "describe" the timing envelope, they are its defining parameters.
 SuggestedRemedy
 Change "describe" to "define".
 Proposed Response Response Status O

Cl 1 SC 1.4.244c P23 L26 # 433
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 I don't know what you mean by "tuple". As you don't bother to use the word anywhere else in this draft, and it doesn't appear in Section 1 with its 507 definitions, it can't be necessary.
 SuggestedRemedy
 Change to "sequence".
 Proposed Response Response Status O

Cl 1 SC 1.4.244d P23 L30 # 462
 Thompson, Geoff GraCaSI S.A./Independent
 Comment Type TR Comment Status X
 The way this currently reads, every envelope and every frame gets this marker at which point it ceases to be a "special marker". The actual meaning and its distinctness need to be described.
 SuggestedRemedy
 Rewrite the definition text to actually be a distinguishing term that can be understood.
 Proposed Response Response Status O

Cl 1 SC 1.4.245a P23 L33 # 463
 Thompson, Geoff GraCaSI S.A./Independent
 Comment Type TR Comment Status X
 This is very confusing. As far as I know, there is no quanta identified within the MAC sub-layer and above that is any finer grained than a MAC Frame. The text implies that the quantification (and identification thereof) exists in the higher layers. This is not true.
 SuggestedRemedy
 Rewrite so it is more obvious that the quantization only exists within the RS and below.
 Proposed Response Response Status O

Cl 1 SC 1.4.245a P23 L35 # 112
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 While the following statement is true for a short time it is not always true (after 267B/256B encoding and EQ would be 64.25 bits) "Within PCS, after the 64B/66B encoding, an envelope quantum contains 66 bits." The stand-a-alone term "EQ" is only used 2x in Cl 142 (pg/line 107/34, 124/17). In both cases the term refers to an observable 72 bit block from the xMII.
 SuggestedRemedy
 Remove the statement "Within PCS, after the 64B/66B encoding, an envelope quantum contains 66 bits."
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 1 SC 1.4.245b P23 L38 # 465
 Thompson, Geoff GraCaSI S.A./Independent
 Comment Type E Comment Status X
 It seems like a really bad idea to make this term speed dependent so that the term will not be usable for a like instance at any other speed.
 SuggestedRemedy
 Change to bit times.
 Proposed Response Response Status O

Cl 1 SC 1.5 P23 L52 # 306
 Lynskey, Eric Broadcom
 Comment Type E Comment Status X
 CDR is already present in IEEE 802.3-2018.
 SuggestedRemedy
 Remove.
 Proposed Response Response Status O

Cl 1 SC 1.4.278 P22 L31 # 431
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Contradictory statements about one or multiple upstream bursts.
 Change:
 In Clause 64 ... LLID. Each grant results in one or multiple upstream bursts transmitted by the ONU. In Clause 144, a grant includes envelope allocations for multiple LLIDs. The OLT conveys a grant to the ONU using one or multiple GATE MPCPDUs, all having the same StartTime values. There is a one-to-one correspondence between ...
 SuggestedRemedy
 to:
 In Clause 64 ... LLID; each grant results in one or multiple upstream bursts transmitted by the ONU. In Clause 144, a grant includes envelope allocations for multiple LLIDs, the OLT conveys a grant to the ONU using one or multiple GATE MPCPDUs, all having the same StartTime values, and there is a one-to-one correspondence between ...
 Proposed Response Response Status O

Cl 1 SC 1.5 P23 L52 # 434
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 CDR doesn't stand for clock data recovery
 SuggestedRemedy
 Change to clock and data recovery
 Proposed Response Response Status O

Cl 1 SC 1.5 P23 L54 # 70
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 New abbreviations are usually presented in alphabetical order
 SuggestedRemedy
 Sort the new abbreviations in to alphabetical order
 Proposed Response Response Status O

Cl 1 SC 1.5 P23 L51 # 69
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 "CDR" is already present in 1.5 Abbreviations in the base standard.
 SuggestedRemedy
 Remove "CDR clock data recovery" from the list of new abbreviations
 Proposed Response Response Status O

Cl 1 SC 1.5 P24 L9 # 260
 D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei
 Comment Type E Comment Status X
 Add abbreviation MCRS
 SuggestedRemedy
 MCRS - multi channel reconciliation sublayer
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 1 SC 1.5 P24 L10 # 71
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 According to:
http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html
 "Physical Layer" is "always capped"
 SuggestedRemedy
 Change:
 "PLID physical layer ID" to:
 "PLID Physical Layer ID"
 Proposed Response Response Status O

Cl 31A SC 31A P246 L16 # 109
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The Value/Comment entry for PAUSE has been in place since the 1998 version of IEEE Std 802.3 without change.
 The Value/Comment entry for GATE has been in place since the 2005 version of IEEE Std 802.3 without change.
 There is no special feature of the P802.3ca draft that requires these changes to be made.
 SuggestedRemedy
 remove the changes shown to these rows of the table.
 Proposed Response Response Status O

Cl 30 SC 30.3.5.1.4 P26 L38 # 327
 Laubach, Mark Broadcom
 Comment Type ER Comment Status X
 The ";" dropped off the end of the line during original editing. This is needed to be consistent with Clause 30 format.
 SuggestedRemedy
 Add the ";" to the end of the line.
 Proposed Response Response Status O

Cl 45 SC 45.2.1 P29 L20 # 72
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The two underlined ellipsis characters in the middle of the table should not be underlined.
 The rows for registers 3.80, 3.81, and 3.82 should be in Table 45-176 not Table 45-3
 SuggestedRemedy
 Delete the row with the two underlined ellipsis characters in the middle of the table.
 Move the rows for registers 3.80, 3.81, and 3.82 to Table 45-176
 Change the bottom ruling of Table 45-3 to the table default.
 Proposed Response Response Status O

Cl 30 SC 30.5.1.1.2 P27 L2 # 392
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Multiple aMAUTypes with the same description
 SuggestedRemedy
 Add words to distinguish them
 Proposed Response Response Status O

Cl 45 SC 45.2.1 P29 L20 # 113
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Ellipses need not be shown as added in Table 45-3 7th row.
 SuggestedRemedy
 remove underlining on ellipses.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.1 P29 L29 # 60
 Zimmerman, George CME Consulting/ADI, APL Gp, Aquantia, BMW, Cisco
 Comment Type E Comment Status X
 Editing instruction needs to include 802.3cg which also modified Table 45-3.
 SuggestedRemedy
 change "as modified by IEEE Std 802.3cb-2018 and IEEE Std 802.3cd-2018" to "as modified by IEEE Std 802.3cb-2018, IEE Std 802.3cd, and IEEE 802.3cg-201x)
 Proposed Response Response Status O

Cl 45 SC 45.2.1.23a.1 P29 L37 # 73
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The subclauses either side of 45.2.1.23a define the bits in order of largest to smallest.
 SuggestedRemedy
 Swap the order of the definitions so that bit 1.29.15 is defined in 45.2.1.23a.1 and bits 1.29.5:0 in 45.2.1.23a.2
 Proposed Response Response Status O

Cl 45 SC 45.2.1.23a P30 L5 # 75
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The name in the title of 45.2.1.23a.2 is Downstream differential encoding, so this is what should be in the "Name" entry for bit 1.29.15 in Table 45-26a
 SuggestedRemedy
 In Table 45-26a:
 In the Name cell for bit 1.29.15, change "DS_Diff_Enc" to " Downstream differential encoding"
 In the Description cell for bit 1.29.15, change " Downstream differential encoding" to:
 "1 = Downstream differential encoding enabled
 0 = Downstream differential encoding disabled"
 Proposed Response Response Status O

Cl 45 SC 45.2.1.23a.1 P29 L41 # 16
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 New "shall" statements were added, but updates to PICS are missing
 SuggestedRemedy
 Updates PICs per hajduczenia_3ca_1_0719.pdf
 Proposed Response Response Status O

Cl 45 SC 45.2.1.23a.1 P29 L37 # 114
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Bit definitions are typically ordered high to low (at least that is how they are defined in 45.2.1.1 - ...3).
 SuggestedRemedy
 Swap sub-clauses so that 45.2.1.23a.2 Downstream Differential Encoding (1.29.15) comes before 45.2.1.23a.1 PMA/PMD type selection (1.29.5:0).
 Proposed Response Response Status O

Cl 45 SC 45.2.1.23a.2 P29 L45 # 74
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 In the title of 45.2.1.23a.2 "Downstream Differential Encoding" should be "Downstream differential encoding" (lower case d and e)
 SuggestedRemedy
 In the title of 45.2.1.23a.2 change: "Downstream Differential Encoding" to: "Downstream differential encoding"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.1.23a.2 P29 L50 # 115

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

"TX PMA" and "RX PMA" are poorly defined.

SuggestedRemedy

Change "TX PMA" to "transmit PMA" and "RX PMA" to "receive PMA"

Proposed Response Response Status O

Cl 45 SC 45.2.1.134a P31 L10 # 393

Dawe, Piers Mellanox

Comment Type E Comment Status X

Table title wraps too short

SuggestedRemedy

Make the text box for table title wider

Proposed Response Response Status O

Cl 45 SC 45.2.1.134a P31 L15 # 76

Anslow, Pete Ciena

Comment Type TR Comment Status X

Table 45-103a contains PMA/PMD "ability" bits. All of the other registers in Clause 45 containing PMA/PMD "ability" bits use the text: "1 = PMA/PMD is able to perform XXGBASE-XXX 0 = PMA/PMD is not able to perform XXGBASE-XXX" The text in Table 45-103a for the PMA/PMD "ability" bits should be consistent with that used for the other PMA/PMD "ability" bits in Clause 45 These bits are not a compliance statement, they are used to indicate whether a device is able to perform as a particular PMA/PMD type.

SuggestedRemedy

In Table 45-103a change the text in the Description column for all PMA/PMD "ability" bits to the form: "1 = PMA/PMD is able to perform XXGBASE-XXX-XX 0 = PMA/PMD is not able to perform XXGBASE-XXX-XX"

Proposed Response Response Status O

Cl 45 SC 45.2.1.134a P31 L54 # 77

Anslow, Pete Ciena

Comment Type E Comment Status X

When tables split across pages, the bottom ruling of the table on the first page should be "very thin"

SuggestedRemedy

Make the bottom ruling "very thin" for: Table 45-103a at the foot of page 31 and page 32 Table 45-217a at the foot of page 43 Table 141-7 at the foot of page 59 Table 142-5 at the foot of page 118 and page 119 Table 144-4 at the foot of page 201

Proposed Response Response Status O

Cl 45 SC 45.2.1.134a.9 P34 L16 # 1

Hajduczenia, Marek Charter Communications

Comment Type E Comment Status X

Make sure that the PMD name is not broken across lines.

SuggestedRemedy

Applies to 45.2.1.134a.9, 45.2.1.134a.10, 45.2.1.134a.11, 45.2.1.134a.12, 45.2.1.134a.13, 45.2.1.134a.14, 45.2.1.134a.15, 45.2.1.134a.16, 45.2.1.134a.23, 45.2.1.134a.24, 45.2.1.134a.25, 45.2.1.134a.26, 45.2.1.134a.27, 45.2.1.134a.28, 45.2.1.134a.29, 45.2.1.134a.30, 45.2.1.134a.31, 45.2.1.134a.32

Proposed Response Response Status O

Cl 45 SC 45.2.1.134a.9 P34 L16 # 116

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

PMA/PMD name crosses the line.

SuggestedRemedy

Change the character format so that the line is not broken by the PMD name at the following locations (pg/line): 34/16, 34/22, 34/28, 34/34, 34/40, 34/46, 34/52, 35/4, 35/46, 35/52, 36/4, 36/10, 36/16, 36/22, 36/28, 36/34, 36/40, & 36/46. Editors licenses to fix any others found.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.1.18aa P33 L36 # 472
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Misspelling
 SuggestedRemedy
 Change: "abilitiy", To: "ability"
 Proposed Response Response Status O

Cl 45 SC 45.2.1.18ab P33 L43 # 473
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Misspelling
 SuggestedRemedy
 Change: "abilitiy", To: "ability"
 Proposed Response Response Status O

Cl 45 SC 45.2.3 P38 L12 # 78
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 In the new names for registers 3.76, 3.77 and 3.78, 3.79 in Table 45-176, there shouldn't be a comma in "PR10G-EPON, and Nx25GEAPON"
 This is shown correctly in 45.2.3.41 and 45.2.3.42
 SuggestedRemedy
 In the new names for registers 3.76, 3.77 and 3.78, 3.79 in Table 45-176, delete the comma in "PR10G-EPON, and Nx25GEAPON" (2 instances)
 Proposed Response Response Status O

Cl 45 SC 45.2.3 P38 L17 # 79
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The Nx25G-EPON synchronization pattern registers in 45.2.3.45a are registers 3.83 through 3.134
 SuggestedRemedy
 In table 45-176 change "3.83 through 3.135" to "3.83 through 3.134"
 In the reserved row change "3.136 through 3.199" to "3.135 through 3.199"
 Proposed Response Response Status O

Cl 45 SC 45.2.3 P39 L3 # 61
 Zimmerman, George CME Consulting/ADI, APL Gp, Aquantia, BMW, Cisco
 Comment Type E Comment Status X
 Editing instruction needs to include 802.3cg which also modified Table 45-176.
 SuggestedRemedy
 change "as modified by IEEE Std 802.3cb-2018 and IEEE Std 802.3cd-2018" to "as modified by IEEE Std 802.3cb-2018, IEE Std 802.3cd, and IEEE 802.3cg-201x"
 Proposed Response Response Status O

Cl 45 SC 45.2.3.6.1 P39 L40 # 117
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Register bits 3.9.0 to 3.9.7 appear to all advertise PCS type abilities.
 SuggestedRemedy
 Change:
 "bits 3.8.9, 3.8.7:0, and 3.9.15:0." to
 "bits 3.8.9, 3.8.7:0, and 3.9.17:0."
 Note the "1" in 3.9.1x is in strike-out text.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.3.6.1 P39 L41 # 80

Anslow, Pete Ciena
Comment Type T Comment Status X

The text as modified: "The PCS type abilities of the PCS are advertised in bits 3.8.9, 3.8.7:0, and 3.9.5:0. A PCS shall ignore writes to the PCS type selection bits that select PCS types it has not advertised in the PCS status 2 register." is not correct. It should read: "The PCS type abilities of the PCS are advertised in bits 3.8.9:0, and 3.9.7:0. A PCS shall ignore writes to the PCS type selection bits that select PCS types it has not advertised in the PCS status 2 register or the PCS status 3 register."

SuggestedRemedy

Change the second and third sentence of 45.2.3.6.1 to: "The PCS type abilities of the PCS are advertised in bits 3.8.9<u>:0</u><s>, 3.8.7:0,</s> and 3.9.<s>1</s><u>7</u></u>:0. A PCS shall ignore writes to the PCS type selection bits that select PCS types it has not advertised in the PCS status 2 register<u> or the PCS status 3 register</u>."

Where:
<u> and </u> are the start and end of underline font
<s> and </s> are the start and end of strikethrough font

Proposed Response Response Status O

Cl 45 SC 45.2.3.8 P40 L8 # 81

Anslow, Pete Ciena
Comment Type E Comment Status X

In Table 45-182, row for bit 3.9.7, "apable" should be "capable"

SuggestedRemedy

In Table 45-182, row for bit 3.9.7, change "apable" to "capable"

Proposed Response Response Status O

Cl 45 SC 45.2.3.43 P41 L39 # 84

Anslow, Pete Ciena
Comment Type E Comment Status X

"update" is not a valid editing instruction.

SuggestedRemedy

In the editing instruction, replace "Update" with "Change"

Proposed Response Response Status O

Cl 45 SC 45.2.3.43 P41 L41 # 85

Anslow, Pete Ciena
Comment Type E Comment Status X

One of the changes shown in 45.2.3.43 to the name of register 3.80 (timer changed to interval) is not reflected in Table 45-176.

Note that another comment proposes to move the row in Table 45-3 for this register to Table 45-176 where it belongs.

SuggestedRemedy

After moving the row for register 3.80 from Table 45-3 to Table 45-176, reflect the change from "timer" to "interval" in the register name using underline and strikethrough.

Proposed Response Response Status O

Cl 45 SC 45.2.3.43 P41 L44 # 62

Zimmerman, George CME Consulting/ADI, APL Gp, Aquantia, BMW, Cisco
Comment Type E Comment Status X

The font of "and" and "and Nx25G EPON" is smaller than the rest of the text.

SuggestedRemedy

fix font of "and", and "an Nx25G EPON"

Proposed Response Response Status O

Cl 45 SC 45.2.3.43 P41 L44 # 492

Brandt, David Rockwell Automation
Comment Type E Comment Status X

Inconsistent font size.

SuggestedRemedy

Make fonts the same size.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.3.43 P42 L2 # 86

Anslow, Pete Ciena
 Comment Type E Comment Status X

"76.3.3.4" should be in forest green. "142.3.5.6" should be a cross-reference.
 Equivalent issues in 45.2.3.44.1 and 45.2.3.45

SuggestedRemedy

Convert to text and apply character tag "External" to:
 "76.3.3.4" in 45.2.3.43
 "76.3.3.4" in 45.2.3.44.1
 "76.3.3.4" in 45.2.3.45
 Make a cross-reference:
 "142.3.5.6" in 45.2.3.43
 "142.3.5.2" in 45.2.3.44.1
 "142.3.5.6" in 45.2.3.45

Proposed Response Response Status O

Cl 45 SC 45.2.3.43 P42 L5 # 328

Laubach, Mark Broadcom
 Comment Type E Comment Status X

underline of word stopped short

SuggestedRemedy

extend the underline to include the last letter in "interval"

Proposed Response Response Status O

Cl 45 SC 45.2.3.44 P42 L25 # 87

Anslow, Pete Ciena
 Comment Type E Comment Status X

", and Nx25G EPON" has been inserted after "BER" in the first sentence of 45.2.3.44
 instead of before.

SuggestedRemedy

Move the insertion of ", and Nx25G EPON" before "BER" in the first sentence of 45.2.3.44
 so that it reads "... 10/1GBASE-PRX, and Nx25G EPON BER monitor ..."

Proposed Response Response Status O

Cl 45 SC 45.2.3.44.1 P42 L49 # 88

Anslow, Pete Ciena
 Comment Type E Comment Status X

In the first sentence of 45.2.3.44.1, there is a spurious " BER" after "10/1GBASE-PRX"

SuggestedRemedy

In the first sentence of 45.2.3.44.1, delete " BER" after "10/1GBASE-PRX"

Proposed Response Response Status O

Cl 45 SC 45.2.3.44.2 P43 L4 # 89

Anslow, Pete Ciena
 Comment Type E Comment Status X

In the first sentence of 45.2.3.44.2, there is a spurious " BER" after "10/1GBASE-PRX" and
 " PCS" is missing after the insertion of ", and Nx25G EPON"

SuggestedRemedy

In the first sentence of 45.2.3.44.1, delete " BER" after "10/1GBASE-PRX" and add " PCS"
 after the insertion of ", and Nx25G EPON"

Proposed Response Response Status O

Cl 45 SC 45.2.3.45a P43 L43 # 307

Lynskey, Eric Broadcom
 Comment Type T Comment Status X

Table 45-217a holds the 257-bit sync pattern values. Throughout Clause 45, there are a
 variety of ways that data is stored in a register when it is greater than 16-bits. Sometimes
 the lower bytes are stored in lower numbered registers (Table 45-242), and sometimes the
 opposite is true (Table 45-202). The order of the bytes should be stated in this table.

SuggestedRemedy

For the SP1 pattern row, change to "The lower 256 bits of SP1. Bit 0 is stored in 3.84.0,
 and bit 255 is stored in 3.99.15." Similar for SP2 and SP3 patterns. If this doesn't fit well
 in the table, then move to the text descriptions that follow the table.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.3.45a P43 L47 # 118
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Table 217a is missing a definition for register bits 3.83.6:15
 SuggestedRemedy
 Add as first row of table:
 3.83.15:6 | Reserved | Value always 0 | RO
 Proposed Response Response Status O

Cl 45 SC 45.2.3.45a P43 L47 # 448
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 SP1, SP2, etc. are already found throughout 802.3-2018 and are used in the context of "Skew Point". Consider a more unique abbreviation for "synchronization pattern". Unique abbreviations aide the general readability and search-ability of the standard.
 SuggestedRemedy
 Replace SP1 with SPTN1 throughout the document. Same for SP2, SP3, etc. SPTNx is merely a suggestion, any other unique acronym would work, too.
 Proposed Response Response Status O

Cl 45 SC 45.2.3.45a P43 L47 # 119
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Register bits in Cl 45 tables are typically listed from high bit to low bit and low register to high register.
 SuggestedRemedy
 Reorder row for register bits 3.83.5 to 3.83.0 in Table 45-217a in descending bit order.
 Proposed Response Response Status O

Cl 45 SC 45.2.3.45a P43 L47 # 90
 Anslow, Pete Ciena
 Comment Type ER Comment Status X
 The table defining bit allocations in Clause 45 always have bit 15 at the top and descending bit numbers below.
 Ranges of bits within a register are shown as x.x.a:b where a is higher than b bits within a register that are not allocated are shown as reserved.
 SuggestedRemedy
 Change the order of rows in Table 45-217a and the bit designations as follows:
 3.83.15:6 | Reserved | Value always 0 | RO
 3.83.5
 3.83.4
 3.83.3
 3.83.2
 3.83.1
 3.83.0
 3.99.15 through 3.84.0
 3.100.15:0
 3.116.15 through 3.101.0
 3.117.15:0
 3.133.15 through 3.118.0
 3.134.15:0
 Proposed Response Response Status O

Cl 45 SC 45.2.3.45a P44 L10 # 120
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Backwards the bits are in "3.1xx.0:15"
 SuggestedRemedy
 In 45.2.3.45a.x Change:
 3.100.0:15 to 3.100.15:0 (4x total)
 3.117.0:15 to 3.117.15:0 (4x total)
 3.134.0:15 to 3.134.15:0 (3x total)
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 45 SC 45.2.3.80.2 P49 L31 # 474
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Duplicate text
 SuggestedRemedy
 Change: "is detecting is detecting", To: "is detecting"
 Proposed Response Response Status O

Cl 45 SC 45.2.3.80.4 P49 L47 # 475
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Description of non-latched source is wrong.
 SuggestedRemedy
 Change: "...PCS high BER status bit (3.2324.9)."
 To: "...PCS high RFER status bit (3.2324.9)."
 Proposed Response Response Status O

Cl 45 SC 45.2.3.8aa P40 L25 # 82
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The heading numbering for 45.2.3.8aa through 45.2.3.11ad should be 45.2.3.8.aa through 45.2.3.8.ad as per the editing instruction.
 SuggestedRemedy
 Change the heading numbering for 45.2.3.8aa through 45.2.3.11ad to 45.2.3.8.aa through 45.2.3.8.ad as per the editing instruction.
 Proposed Response Response Status O

Cl 45 SC 45.2.3.8aa P40 L28 # 83
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 At the end of the paragraph "the 25GBASE-PQ PCS type" should be "the 25/25GBASE-PQ PCS type"
 SuggestedRemedy
 At the end of the paragraph change "the 25GBASE-PQ PCS type" to "the 25/25GBASE-PQ PCS type"
 Proposed Response Response Status O

Cl 56 SC 56.1 P47 L1 # 91
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 Figures in 802.3 do not have a border round them.
 SuggestedRemedy
 Remove the border from Figure 56-5a
 Proposed Response Response Status O

Cl 56 SC 56.1 P47 L1 # 395
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Per IEEE Standards Style Manual, there should be no borders around the graphic. And, it doesn't match figs 56-2 to 5.
 SuggestedRemedy
 Remove the black box round the figure and its title.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 56 SC 56.1 P47 L3 # 400
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Rogue capitals
 SuggestedRemedy
 Unless these are proper nouns, change "OLT Control Plane" and "OLT Data Plane" to "OLT control plane" and "OLT data plane" and similarly for ONU. Several occurrences.
 Proposed Response Response Status O

Cl 56 SC 56.1 P47 L3 # 399
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Undefined terms "Control Plane", "Data Plane"
 SuggestedRemedy
 Explain
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P46 L32 # 394
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 PON with the nominal MAC data
 SuggestedRemedy
 PON with a nominal MAC data (several places)
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P46 L38 # 378
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 This PHY sensibly keeps the 25.78125 GBd line rate but uses stronger FEC with 20% (Fig 142-5) or $1-1/0.848 = 17.9\%$ (142.2.4.2) overhead. Even after reclaiming about 3% by 257b recoding, that's around 21.4 Gb/s MAC rate, which is too far from 25 to say "nominal MAC data rate of 25 Gb/s".
 SuggestedRemedy
 Giving the PHY types names with 25G in them is fair, because that represents the technology used - but this part of the draft text is misleading.

In this paragraph, change "25 Gb/s" to "21.4 Gb/s" and "50 Gb/2" to "42.8 Gb/s".
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P46 L52 # 396
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 channel - has multiple meanings already - you are introducing a new thing
 SuggestedRemedy
 Change "channel" to "wavelength" (or maybe "MCRS channel", several times. "PCS and PMA channel" can also be changed to "wavelength".
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P47 L1 # 283
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Why is there a box around Figure 56-5a? There is not a box around the other Clause 56 Figures and this is not they style found in other Clauses.
 SuggestedRemedy
 Remove box around Figure 56-5a.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 56 SC 56.1.2 P47 L19 # 397
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 "PCS channel" is new, may need more introduction.
 SuggestedRemedy
 Are there two independent, parallel PCSs or are they linked (how)?
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P47 L52 # 255
 D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei
 Comment Type E Comment Status X
 The architectural diagram has a border box around it. Not consistent with other Clause 56 diagrams in IEEE 802.3
 SuggestedRemedy
 delete border box
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P47 L52 # 256
 D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei
 Comment Type E Comment Status X
 Title of diagram not consistent with other similar diagrams in Clause 56 of 802.3
 See also Fig 141-1, p56
 See also Fig 142-1, p.104
 See also Fig 143-17, p 173
 See also Fig 144-2 P 182
 SuggestedRemedy
 rename title of diagram - Figure 56-4—Architectural positioning of EFM:
 P2MP n X 25G-EPON architecture
 Proposed Response Response Status O

Cl 56 SC 56.1.2 P47 L52 # 257
 D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei
 Comment Type E Comment Status X
 Diagram not drawn in consistent manner with other similar diagrams in Clause 56.
 Example- the vertical 25GMII text inside the diagram- as well as how the entire MII interface is drawn
 See also Fig 141-1, p56
 See also Fig 142-1, p.104
 See also Fig 143-17, p 173
 See also Fig 144-2 P 182

SuggestedRemedy
 redraw figure to be consistent with 56-1, 56-2, 56-3, 56-4.
 Proposed Response Response Status O

Cl 56 SC 56.1.3 P48 L38 # 92
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 Editing instructions do not include the project name and not all of the rows of the table are shown.
 SuggestedRemedy
 Change editing instruction to: "Insert new PMD types at the end of Table 56-1 (below 10GPASS-XR-U entry), as follows (unchanged rows not shown):
 Proposed Response Response Status O

Cl 56 SC 56.1.3 P48 L46 # 93
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 Only one body row of Table 56-1 (containing ellipsis) is shown before the page break.
 As the editing instruction is "Insert", the inserted rows should not be underlined.
 SuggestedRemedy
 Move the first row of Table 56-1 on to the next page and remove the underlining from the inserted rows.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 56 SC 56.1.3 P50 L21 # 94
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 Editing instructions use the term "paragraph" rather than "statement".
 The "Insert" editing instruction does not use underline to indicate insertion.
 SuggestedRemedy
 In the editing instruction, change "after the statement" to "after the paragraph".
 Remove the underline from the inserted text.
 Proposed Response Response Status O

Cl 56 SC 56.1.3 P50 L25 # 398
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 You can't make a PON with a single PMD type. Also, there are options.
 SuggestedRemedy
 Change "All these systems employ a PMD defined in Clause 141." to "All these systems employ PMDs defined in Clause 141."
 Proposed Response Response Status O

Cl 56 SC 56.1.3 P51 L6 # 427
 Dawe, Piers Mellanox
 Comment Type ER Comment Status X
 The standard clause order is down the layer stack: MAC then RS then PCS then PMA then PMD. We are stuck with the eccentric order of some previous projects but we can do a new one right.
 SuggestedRemedy
 Renumber the clauses 141-144: MPMC then MCRS then PCS/PMA then PMD.
 We can also order the existing columns in Table 56-3 from top to bottom - they don't have to be in numerical order
 Proposed Response Response Status O

Cl 56 SC 56.1.3 P54 L5 # 284
 Wienckowski, Natalie General Motors
 Comment Type T Comment Status X
 Clause 100 was removed from Table 56-3 but wasn't put into Table 56-4.
 SuggestedRemedy
 Add Clause 100 in Table 56-4.
 Proposed Response Response Status O

Cl 67 SC 67 P55 L1 # 326
 Laubach, Mark Broadcom
 Comment Type TR Comment Status X
 Draft is missing updates to Clause 67 for System considerations for Ethernet subscriber access networks
 SuggestedRemedy
 Update Table 67-1 as per laubach_3ca_1_0719.pdf to add entries for the P802.3ca media types.
 Proposed Response Response Status O

Cl 141 SC 141 P55 L1 # 121
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 It is customary to include an editing Instruction prior to new clauses as noted in the WG Template v3.9.
 SuggestedRemedy
 Insert before Clause 141
 "Insert new clauses and corresponding annexes as follows."
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 141 SC 141.1.2 P56 L1 # 17
 Hajduczenia, Marek Charter Communications
 Comment Type TR Comment Status X
 Figure 141-1 shows Nx25G-EPON and not EPON.
 SuggestedRemedy
 Change "EPON" to "Nx25G-EPON" in caption.
 Also, we need to show XGMII in there as an option for OLT and ONU, since we also support asymmetric mode of operation with 10Gbps dat arate
 Proposed Response Response Status O

Cl 141 SC 141.1.2 P56 L1 # 122
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 In Fig 141-1 (and the other similar figures in 142, 143, & 144) all show two 25GMII interfaces but never indicate use of the XGMII.
 SuggestedRemedy
 For each of the four figures in 2 places, adjacent to the right of OLT and ONU 25GMII, add "Note 1". Below the graphic and above the key add the following: "Note 1: in some instances of Nx25-EPON one-half of an XGMII (transmit or receive) may be paired with a complementary half (receive or transmit) of a 25GMII to provide a 25Gb/s downstream and 10Gb/s upstream interface."
 Proposed Response Response Status O

Cl 141 SC 141.1.3 P55 L31 # 356
 Dudek, Mike Marvell
 Comment Type T Comment Status X
 Other than it saying DW0 +DW1 for the 50G link in table 141-7 and there being two wavelengths listed in table 141-3 etc. it is not obvious that wdm is being used for 50G.
 SuggestedRemedy
 Add a sentence at the end of the paragraph (at line 31). "Links supporting 50Gb/s use wavelength division multiplexing on two wavelengths and hence two wavelengths are listed for these links.
 Proposed Response Response Status O

Cl 141 SC 141.1.3 P55 L38 # 285
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 25.78125
 To: 25.781 25
 Proposed Response Response Status O

Cl 141 SC 141.1.3 P55 L39 # 286
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 10.3125
 To: 10.312 5
 Proposed Response Response Status O

Cl 141 SC 141.1.3 P57 L8 # 287
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 25.78125
 To: 25.781 25
 Also on P57 L9, P57 L 24, P57 L40, P57 L41, P58 L 6, P58 L7, P66 L11, P67 L13, P71 L11, P72 L13, P73 L18, & P74 L14.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 141 SC 141.1.3 P57 L25 # 288
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 10.3125
 To: 10.312 5
 Proposed Response Response Status O

Cl 141 SC 141.2.5 P58 L50 # 402
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Will these work over less than 1:16 and/or less than 20 km? As stated, it's all about overload. But that contradicts " \leq x dB".
 SuggestedRemedy
 Rephrase "at least".
 Proposed Response Response Status O

Cl 141 SC 141.2.5 P58 L1 # 403
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 "A medium PMD power class" and "A high PMD power class" but "The medium power budget class"
 SuggestedRemedy
 Per style manual: use the same name for the same thing, every time.
 Proposed Response Response Status O

Cl 141 SC 141.2.6 P59 L9 # 18
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 it would be easier on reader's eyes to see $r_{1₁}$ and not r1. Same for r2. This is used only in this clause, so changes are minimum
 SuggestedRemedy
 Per comment
 Proposed Response Response Status O

Cl 141 SC 141.2.5 P58 L50 # 401
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 with the split ratio of
 SuggestedRemedy
 with a split ratio of
 Proposed Response Response Status O

Cl 141 SC 141.2.6 P59 L17 # 406
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 "rate class (in Gb/s)", "PMDs operate at Gigabit rates"
 SuggestedRemedy
 Gigabit -> gigabit/s. But actually, G is a multiplier for r1/r2
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 141 SC 141.2.6 P59 L18 # 405
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 Optical PMDs don't use a baseband signal! 1.2.3 says only "The modulation type (e.g., BASE) indicates how encoded data is transmitted on the medium".
 SuggestedRemedy
 So far, optical PMDs all have BASE in their name (so in effect, it just signifies Ethernet) and all use "intensity modulation". However, P802.3ct may call coherent PMDs "BASE" too. This cell could be left blank.
 Proposed Response Response Status O

Cl 141 SC 141.2.7 P59 L29 # 408
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 paired PMDs transmitter launch power and receiver sensitivity
 SuggestedRemedy
 paired PMD's transmitter launch powers and receiver sensitivities
 Proposed Response Response Status O

Cl 141 SC 141.2.7 P59 L29 # 407
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 "a power budget is a characteristic of a link"
 SuggestedRemedy
 No, attenuation or "insertion loss" is a characteristic of the link. A power budget is a characteristic of a pair of PMD types, of a link type, or of a class of links.
 Proposed Response Response Status O

Cl 141 SC 141.2.7 P59 L33 # 410
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Aside from the notes about "same coexistence mode, either X or G": If one is not interested in coexistence, (or even if one is), in what circumstances can a G connect to another G, or to an X?
 SuggestedRemedy
 Spell it out clearly
 Proposed Response Response Status O

Cl 141 SC 141.2.7 P59 L35 # 329
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Table 141-7, as table is split across pages, missing bottom ruling of table on page 59 and missing "(continued)" in table title on page 60. This is Framemaker table stuff.
 SuggestedRemedy
 Add the ruling. Do the variable thing to add the "(continue)".
 Proposed Response Response Status O

Cl 141 SC 141.2.7 P59 L38 # 409
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Downstream
 SuggestedRemedy
 Break after the /
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

CI 141 SC 141.2.7 P59 L40 # 19
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Footnote (b) location in Table 141-7 is odd (it moved to a new line)
 SuggestedRemedy
 Make sure footnote (b) location is with the main text of the column caption (extend column size a bit)
 Proposed Response Response Status O

CI 141 SC 141.2.7.1 P60 L41 # 22
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Subclause 141.2.3 refers to coexistence options as coexistence classes and not coexistence modes
 SuggestedRemedy
 Change "support the same coexistence mode" to "support the same coexistence class"
 The same change on Page 61, like 25
 Proposed Response Response Status O

CI 141 SC 141.2.7 P60 L1 # 20
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 No "(continued) marker for Table 141-7 caption
 SuggestedRemedy
 Make sure it is added
 Proposed Response Response Status O

CI 141 SC 141.3 P61 L29 # 123
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 There are 9 instance of "PQ type PMD" and 15 instances of "Nx25G-EPON PMD". These two terms are synonymous and we should only use one. Note that Fig 141-2 is referred to using PQ type PMDs but the title indicates Nx25F-EPON PMD and Table 141-1 title is " for Nx25G-EPON PMDs" but PMD type is "PQ type PMD".
 Fewer new terms are easier on the 1st time reader.
 SuggestedRemedy
 Change all instance of "PQ type PMD" to "25G-EPON PMD"
 Note 1x in CI 142
 Proposed Response Response Status O

CI 141 SC 141.2.7.1 P60 L19 # 21
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 "Table 141-8 illustrates recommended pairings ..." - it implies these are just recommendations and other pairings are possible
 SuggestedRemedy
 Strike "recommended"
 Proposed Response Response Status O

CI 141 SC 141.3.1.1 P61 L50 # 411
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 EQT?
 SuggestedRemedy
 As this is its first apperance, explain, e.g. with a cross-reference
 Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.3.1.2 P62 L1 # 413
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 80.3.3.1 has "The IS_UNITDATA_i.request (where i = 0 to n – 1) primitive is used..." Why does this use [] notation for what seems to be an equivalent thing?
 SuggestedRemedy
 Be consistent. Explain what i is.
 Proposed Response Response Status O

Cl 141 SC 141.3.3 P64 L2 # 355
 Dudek, Mike Marvell
 Comment Type TR Comment Status X
 I could not find which bits are allocated to DW1 and which to DW0. I would have expected that information to be in 141.3.3 and 141.3.4. Does it matter? (I suspect it does).
 SuggestedRemedy
 Add the extra information or state explicitly that it doesn't matter.
 Proposed Response Response Status O

Cl 141 SC 141.3.1.2 P62 L8 # 412
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 signaling speed
 SuggestedRemedy
 signaling rate
 Proposed Response Response Status O

Cl 141 SC 141.3.6 P64 L45 # 415
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Just saying "it's defined" isn't enough.
 SuggestedRemedy
 Define it (at a superficial level), or refer to somewhere that does.
 Proposed Response Response Status O

Cl 141 SC 141.3.3 P64 L2 # 414
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 As there are three levels
 SuggestedRemedy
 Change "higher" to "highest"
 Proposed Response Response Status O

Cl 141 SC 141.5 P65 L # 350
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 There are 48 uses of a plus-minus symbol in the draft. The majority uses a non-breaking space between the symbol and the following number. Suggest making the 5 uses in lines 6 through 7 and 15 through 19 consistent.
 SuggestedRemedy
 Add the non-breaking space after the plus-minus symbol.
 Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.5 P65 L24 # 124

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

There are 2 instances of "PQ PHY". Whereas Nx25G-EPON PHY appears 256 times. Random new terms are not desirable.

SuggestedRemedy

Change "PQ PHY" to "Nx25G-EPON PHY"

Proposed Response Response Status O

Cl 141 SC 141.5 P65 L25 # 125

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

There are 2 instances of "PQ compliant". Whereas Nx25G-EPON PHY appears 256 times. Random new terms are not desirable.

SuggestedRemedy

Change all instances of "PQ compliant" to "Nx25G-EPON compliant"

Proposed Response Response Status O

Cl 141 SC 141.5.1 P66 L16 # 95

Anslow, Pete Ciena

Comment Type E Comment Status X

IEEE uses an en-dash as a minus sign Empty cells in tables contain an em-dash

SuggestedRemedy

Change the minus sign to an en-dash (Ctrl-q Shft-p) throughout the entire draft. For example:

- 3 instances in Table 141-13
3 instances in Table 141-14
8 instances in Table 141-15 (and footnote d)
9 instances in Table 141-16 (and footnote e)
3 instances in Table 141-17
3 instances in Table 141-18
8 instances in Table 141-19 (and footnote c)
8 instances in Table 141-20
4 instances in Table 141-21
etc.

Populate empty table cells with an em-dash (Ctrl-q Shft-q) throughout the entire draft. For example:

- 2 instances in Table 141-13
2 instances in Table 141-14
2 instances in Table 141-17
2 instances in Table 141-18
etc.

Proposed Response Response Status O

Cl 141 SC 141.5.1 P66 L22 # 96

Anslow, Pete Ciena

Comment Type E Comment Status X

">=" should be a single character (Ctrl-q 8 in Symbol font) Same issue in Table 141-14

SuggestedRemedy

change ">=" to a single character (Ctrl-q 8 in Symbol font) here and in Table 141-14 (page 67, line 22)

Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.5.1 P66 L27 # 416
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 An extinction ratio minimum of 8 dB sounds like an unhelpful constraint, which may force implementers to set up at worse TDP than they could have done.
 SuggestedRemedy
 Relax the extinction ratio minimum, add another OMA-TDP class at line 24 as necessary. This will cost the receiver nothing and widen the implementation options for the transmitter. Adjust note b from "at minimum extinction ratio" to "at 8 dB extinction ratio".
 Proposed Response Response Status

Cl 141 SC 141.5.1 P66 L35 # 23
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "the OMA (min) must exceed this value" - sounds like it is intended to be a hard requirement? If that is the case, it should be converted into a "shall" statement and PICS updated accordingly
 SuggestedRemedy
 Per comment. The same comment applies to page 67, like 35; page 71, line 46, and page 72, line 42
 Proposed Response Response Status

Cl 141 SC 141.5.1 P66 L34 # 417
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 10GBASE-SR: BER 1e-12, TDP max 3.9, mask {0.25, 0.40, 0.45, 0.25, 0.28, 0.40} ("no hits") or {0.235, 0.395, 0.45, 0.235, 0.265, 0.4} at 5e10-5 hits/sample
 40GBASE-SR4: BER 1e-12, TDP max 3.5, mask {0.23, 0.34, 0.43, 0.27, 0.35, 0.4} at 5e10-5 hits/ sample
 25GBASE-SR: BER 5e10-5, TDEC max 4.3 dB, mask {0.3, 0.38, 0.45, 0.35, 0.41, 0.5} at 1.5e-3 hits/sample. KR FEC
 25GBASE-LR, ER: BER 5e10-5, TDP max 2.7 dB, {0.31, 0.4, 0.45, 0.34, 0.38, 0.4} at 5e-5 hits/sample. KR FEC
 This draft OLT: BER 1e-2, TDP max 1.5 dB, {0.25, 0.4, 0.45, 0.25, 0.28, 0.4} at 5e-5 hits/sample. QC-LDPC FEC
 ONU BER 1e-2, TDP max 2 dB, mask coordinates as 25GBASE-LR, ER. QC-LDPC FEC
 SuggestedRemedy
 So we need a new mask hit ratio, somewhere near 1e-2, and should review the mask coordinates when that is known.
 Proposed Response Response Status

Cl 141 SC 141.5.2 P68 L3 # 126
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 50/25GBASE-PQG-D2 and 50/25GBASE-PQX-D2 appear in Table 141-15 twice, once with a single receive wavelength and once with two.
 The same issues exists in Tables 141-16, 141-17 & 141-18.
 SuggestedRemedy
 Remove the 2nd instance (indicating 2 center wavelengths) of both.
 Proposed Response Response Status

Cl 141 SC 141.5.2 P68 L32 # 418
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 If these PMDs use FEC, probably the stressed receive signal should be defined by SEC, J2 and J4, as 25GBASE-SR, LR and ER, rather than VECF, J2 and J9 as 40GBASE-SR4.
 SuggestedRemedy
 But as the pre-BER is 1e-2, even J4 is wrong. Maybe Jrms and J3 would be suitable. SEC can easily be defined for a BER of 1e-2.
 Proposed Response Response Status

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 141 SC 141.5.2 P68 L35 # 439

Powell, William Nokia
 Comment Type TR Comment Status X

Tables 141–15: In addition to “Vertical eye closure penalty”, footnote (f) should also apply to “Stressed eye J2 Jitter” and “Stressed eye J9 Jitter” since it refers to all 3 parameters, and to make it consistent with footnote (e) in Table 141-19.

SuggestedRemedy

Apply footnote (f) to “Stressed eye J2 Jitter” and “Stressed eye J9 Jitter” in Table 141-15.

Proposed Response Response Status O

Cl 141 SC 141.5.2 P68 L37 # 310

Lynskey, Eric Broadcom
 Comment Type T Comment Status X

Table 141-15 references Table 75-6, which does not contain two entries for stressed eye jitter.

SuggestedRemedy

Mark this cell as not applicable.

Proposed Response Response Status O

Cl 141 SC 141.5.2 P69 L20 # 437

Powell, William Nokia
 Comment Type TR Comment Status X

Table 141-16 has an entry for Average receive power, each channel (min) while it's medium power class cousin, Table 141-15, does not, which is not consistent. That entry should be removed per the rationale in comment #279 on D1.1 (John Johnson): "The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals."

SuggestedRemedy

Remove Average receive power, each channel (min) from Table 141-16.

Proposed Response Response Status O

Cl 141 SC 141.5.2 P69 L20 # 446

Johnson, John Broadcom
 Comment Type T Comment Status X

The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals. This line should be removed from Table 141-16. (This repeats a comment originally submitted against D1.1)

SuggestedRemedy

Delete the line for "Average receive power, each channel (min)" in Table 141-16 and remove associated footnote (d).

Proposed Response Response Status O

Cl 141 SC 141.5.2 P69 L20 # 308

Lynskey, Eric Broadcom
 Comment Type T Comment Status X

Table 141-16 references Table 75-6, which does not contain an entry for Average receive power (min).

SuggestedRemedy

Mark this cell as not applicable.

Proposed Response Response Status O

Cl 141 SC 141.5.2 P69 L37 # 441

Powell, William Nokia
 Comment Type TR Comment Status X

Table 141–16: In addition to “Vertical eye closure penalty”, footnote (g) should also apply to “Stressed eye J2 Jitter” and “Stressed eye J9 Jitter” since it refers to all 3 parameters, and to make it consistent with Table 141-19.

SuggestedRemedy

Apply footnote (g) to “Stressed eye J2 Jitter” and “Stressed eye J9 Jitter” in Table 141-16.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 141 SC 141.5.2 P69 L38 # 309
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 Table 141-16 references Table 75-6, which does not contain two entries for stressed eye jitter.
 SuggestedRemedy
 Mark this cell as not applicable.
 Proposed Response Response Status O

Cl 141 SC 141.6 P70 L7 # 127
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Table 141-21 does not list media types as asserted in the following "A PQ compliant transceiver operates over the media types listed in Table 141-21 according to the specifications described in 141.9".
 We could restructure the table similar to Table 75-14 or change the statement.
 SuggestedRemedy
 Change:
 "media types listed in" to
 "media meeting the dispersion shown in"
 Proposed Response Response Status O

Cl 141 SC 141.6.2 P73 L39 # 25
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 Explicit "shall" statement with no paired PICS
 SuggestedRemedy
 Given that the table is normative as is, if this statement needs to be normative on its own, it needs to be added extra into PICS independently. Given that the same statement exists for each OLT and ONU receiver type, we could either add a new statement to 141.10.4.1 (FN13) or add a new statement into each and every PICS subclause for every PMD type (141.10.4.2 onwards). My preference is on the first approach
 Proposed Response Response Status O

Cl 141 SC 141.6.2 P74 L19 # 447
 Johnson, John Broadcom
 Comment Type T Comment Status X
 The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals. This line should be removed from Table 141-20. (This repeats a comment originally submitted against D1.1)
 SuggestedRemedy
 Delete the line for "Average receive power, each channel (min)" in Table 141-20.
 Proposed Response Response Status O

Cl 141 SC 141.6.2 P74 L19 # 438
 Powell, William Nokia
 Comment Type TR Comment Status X
 Table 141-20 has an entry for Average receive power, each channel (min) while it's medium power class cousin, Table 141-19, does not, which is not consistent. That entry should be removed per the rationale in comment #283 on D1.1 (John Johnson): "The inclusion of an informative spec on minimum average receive power doesn't serve any purpose to specify a compliant RX. An RX that meets the requirements of maximum receiver sensitivity (OMA) and maximum stressed receiver sensitivity (OMA) is compliant, even for very low values of AVP associated with very high ER signals."
 SuggestedRemedy
 Remove Average receive power, each channel (min) from Table 141-20.
 Proposed Response Response Status O

Cl 141 SC 141.6.2 P74 L30 # 440
 Powell, William Nokia
 Comment Type TR Comment Status X
 Tables 141-20: In addition to "Vertical eye closure penalty", footnote (f) should also apply to "Stressed eye J2 Jitter" and "Stressed eye J9 Jitter" since it refers to all 3 parameters, and to make it consistent with footnote (e) in Table 141-19.
 SuggestedRemedy
 Apply footnote (f) to "Stressed eye J2 Jitter" and "Stressed eye J9 Jitter" in Table 141-20.
 Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.7 P75 L4 # 24
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 SuggestedRemedy
 Proposed Response Response Status O

Cl 141 SC 141.7.4 P75 L31 # 419
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 ANSI/EIA-455-95 is not in the normative references but IEC 61280-1-1 is.
 SuggestedRemedy
 ANSI/EIA-455-95 to IEC 61280-1-1
 Proposed Response Response Status O

Cl 141 SC 141.7.1 P75 L11 # 56
 Kolesar, Paul CommScope
 Comment Type T Comment Status X
 Suboptimal and possibly conflicting reference for insertion loss testing. The ITU reference is mostly for measurements in a factory environment. The IEC reference in clause 141.9.1 is for installed cabling and more relevant to the qualification of cable plant in the field.
 SuggestedRemedy
 Replace "A suitable test method is described in ITU-T G.650.1." with "Insertion loss measurements of installed fiber cables are made in accordance with IEC 61280-4-2."
 Proposed Response Response Status O

Cl 141 SC 141.7.5 P75 L36 # 57
 Kolesar, Paul CommScope
 Comment Type T Comment Status X
 Incorrect reference to test method. Digits appear transposed.
 SuggestedRemedy
 Replace 61820-2-2 with 61280-2-2.
 Proposed Response Response Status O

Cl 141 SC 141.7.2 P75 L18 # 128
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 We should note that Table 88-11 specifies "valid 100GBASE-R signal" in some instances.
 SuggestedRemedy
 Add to the end of the para "A valid 25G-EPON signal is substituted for the 100GBASE-R signal specified in Table 88-16."
 Highlight Table 88-16 in forest green.
 Proposed Response Response Status O

Cl 141 SC 141.7.9 P76 L # 421
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 141.7.9.1 reference Tx, 141.7.9.3 reference Rx and 141.7.9.4 (BER) don't apply to the 10G Tx in an ONU.
 SuggestedRemedy
 Add text to make this clear, as it is in 141.7.10, Receive sensitivity and 141.7.11, SRS.
 Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.7.9 P76 L6 # 420
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 141.7.9 (TDP) references 88.8.5 but 88.8.5.4 says "as defined in 52.9.10.4 ...the BER of 1×10^{-12} ". However, 141.7.9.4 says BER of 1×10^{-2} .
 SuggestedRemedy
 Change "with an optical channel that meets the requirements listed in 141.7.9.2" to "with the exceptions in 141.7.9.2 and 141.7.9.4".
 Proposed Response Response Status O

Cl 141 SC 141.7.9.2 P76 L22 # 97
 Anslow, Pete Ciena
 Comment Type T Comment Status X
 The equation for Dmin (Equation 141-1) is the minimum of three terms:
 0
 $0.365 \times \lambda \times (1 - (1324/\lambda)^4)$
 $0.465 \times \lambda \times (1 - (1324/\lambda)^4)$
 When λ is greater than 1324 nm, the second and third terms are positive and Dmin is zero.
 When λ is less than 1324 nm, the second and third terms are negative and the third term is always more negative than the second term.
 Consequently, the second term has no effect on the value of Dmin and should be deleted. Likewise in the equation for Dmax (Equation 141-2) the second term has no effect on the value of Dmax and should be deleted.
 SuggestedRemedy
 In Equation (141-1) delete the second term $0.365 \times \lambda \times (1 - (1324/\lambda)^4)$ leaving:
 $D_{min} = \min(0, 0.465 \times \lambda \times (1 - (1324/\lambda)^4))$
 In Equation (141-2) delete the second term $0.365 \times \lambda \times (1 - (1300/\lambda)^4)$ leaving:
 $D_{max} = \max(0, 0.465 \times \lambda \times (1 - (1300/\lambda)^4))$
 Proposed Response Response Status O

Cl 141 SC 141.7.9.4 P76 L44 # 129
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 This is the only instance of "lane" that doesn't apply to the IEEE address (as in Hoe's Lane) or an xMII lane.
 SuggestedRemedy
 Change "lane" to "channel"
 Proposed Response Response Status O

Cl 141 SC 141.7.10 P76 L47 # 130
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Unwarranted Wild Goose Chase . Here -> 141.7.2 -> Table 88-11.
 Also I don't think we define Rx sensitive for test patterns.
 SuggestedRemedy
 Change
 "Receiver sensitivity is defined for test patterns in 75.7.3 (10G) and 141.7.2 (25G)." to "The test patterns in 75.7.3 (10G) and Table 83-11 (25G) are use to test receiver sensitivity."
 "75.7.3" & "Table 88-11" in forest green.
 Proposed Response Response Status O

Cl 141 SC 141.7.10 P76 L48 # 422
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Receive sensitivity
 SuggestedRemedy
 Receiver sensitivity
 Proposed Response Response Status O

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Cl 141 SC 141.7.12 P77 L12 # 424
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 "When measuring jitter at TP1[i] and TP5[i]" do we give even recommendations for jitter at TP1[i] and TP5[i] in this clause?
 SuggestedRemedy
 Delete? Change to address the jitter measurements we do have (in SRS calibration)?
 Proposed Response Response Status O

Cl 141 SC 141.7.12 P77 L12 # 423
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Filtering out the low frequency jitter is a necessary part of the definition, it can't be left "recommended" or there is significant ambiguity.
 SuggestedRemedy
 Usually the same reference CRU as for several other definitions is invoked. This can be done by reference.
 We may need to say more, e.g. references to the jitter metrics such as J2.
 Proposed Response Response Status O

Cl 141 SC 141.7.13.1 P78 L7 # 425
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 Fig 141-3 does not show Toff correctly. 15% does not come into it.
 SuggestedRemedy
 It's simply the time to the average power of OFF transmitter in the relevant table.
 Proposed Response Response Status O

Cl 141 SC 141.7.13.2 P77 L41 # 131
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 There is no TP4 in Figure 141-4: "the optical signal at TP3 to an electrical signal at TP4 ..."
 SuggestedRemedy
 Strike "at TP4"
 Proposed Response Response Status O

Cl 141 SC 141.7.13.2 P77 L42 # 29
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "A scope, with a variable delay, can measure" to "A scope, with a variable delay, is able to measure"
 Proposed Response Response Status O

Cl 141 SC 141.7.13.2 P77 L49 # 26
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "must" used and not intended per Style Guide
 SuggestedRemedy
 Change "Notice that only the steady state optical OFF power must be conformed" to "Notice that only the steady state optical OFF power is expected to be conformed"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 141 SC 141.7.13.2 P78 L1 # 98

Anslow, Pete

Ciena

Comment Type ER Comment Status X

Some of the figures in the draft are appropriately drawn. However, a number of the figures are inserted as bit maps.

This has several drawbacks: the rendition of the figures is poor making small text difficult to read, the use of bit maps increases the file size unnecessarily, the text content of the figures is not searchable and most importantly, including non-editable figures makes life difficult if changes are required in Maintenance after the figure has been incorporated into the next revision.

SuggestedRemedy

Go through the entire draft replacing figures that have been pasted as bit maps with versions that are drawn in FrameMaker.

If there are any figures illustrating equations, use a vector graphics (e.g. .svg format) and apply any text annotations in FrameMaker.

Example figures needing to be replaced are Figures 141-3, 142-2, 142-5, 142-6, 142-7, 142-8, 142-9, 142-13, 142-14, 142-15, 142-16, 142-18, 143-1, 143-2, 143-3, 143-4, 143-5, 143-6, 143-7, 143-8, 143-9, 143-12, 143-13, 143-15, 143-16, 144-3, 144-4, 144-5, 144-6, 144-7, 144-8, 144-9, 144-10, 144-11, 144-12, 144-13, 144-13, 144-14, 144-15, 144-16, 144-17, 144-18, 144-20, 144-21, 144-22, 144-23, 144-24, 144-25, 144-26, 144-27, 144-28, 144-29, 144-31, 144-32, 144-33, 144-34, 142A-1

Proposed Response Response Status O

Cl 141 SC 141.7.14 P78 L48 # 132

Remein, Duane

Futurewei Technologies, Inc.

Comment Type E Comment Status X

The illustration is Figure 141-5 not 141.7.13.2

SuggestedRemedy

Change "141.7.13.2" to "Figure 141-5"

Proposed Response Response Status O

Cl 141 SC 141.7.14 P78 L48 # 426

Dawe, Piers

Mellanox

Comment Type E Comment Status X

141.7.13.2

SuggestedRemedy

141.7.14.2

Proposed Response Response Status O

Cl 141 SC 141.7.14.2 P79 L49 # 27

Hajduczenia, Marek

Charter Communications

Comment Type ER Comment Status X

"must" used and not intended per Style Guide

SuggestedRemedy

Change "time must be met in the following scenarios" to "time is expected to be met in the following scenarios"

Proposed Response Response Status O

Cl 141 SC 141.9.1 P81 L10 # 55

Kolesar, Paul

CommScope

Comment Type T Comment Status X

Outdated reference to 61280-2-4:2000

SuggestedRemedy

This standard was revised in 2014. But the reference should be undated to always imply the latest revision. Remove ":2000" from the reference.

Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.9.2 P81 L17 # 369
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 described in Table 141-21
 SuggestedRemedy
 given in Table 141-21
 Proposed Response Response Status O

Cl 141 SC 141.9.2 P81 L25 # 100
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 In Table 141-21 "20km" should be "20 km" (space between a number and its unit)
 SuggestedRemedy
 In Table 141-21, change "20km" to "20 km" (2 instances)
 Proposed Response Response Status O

Cl 141 SC 141.9.2 P81 L25 # 435
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Max Dispersion (at 20km)
 SuggestedRemedy
 Max dispersion (at 20 space km)
 Similarly for Min
 Proposed Response Response Status O

Cl 141 SC 141.9.2 P81 L28 # 370
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 sec-
 tion
 SuggestedRemedy
 Make the table full width
 Proposed Response Response Status O

Cl 141 SC 141.9.2 P81 L30 # 99
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The first sentence of footnote b to Table 141-21 is: "These dispersion requirements are satisfied by fibers specified in ITU-T G.652D (low water peak, dispersion unshifted SMF) and ITU-T G.657A (bend-insensitive SMF)."
 The two ITU-T Recommendations are G.652 and G.657. The 2016 version of G.652 (as referenced by the P802.3ca draft) contains specifications for two fiber types G.652.B and G.652.D (note the extra dot between 652 and the letter B or D). The 2009 version of G.657 (as per the base standard) contains specifications for two fiber types G.657 Category A and G.657 Category B. The 2016 version of G.657 (not referenced) contains specifications for two fiber types G.657.A and G.657.B.
 Consequently, the first sentence of footnote b to Table 141-21 is incorrect.
 SuggestedRemedy
 Change the first sentence of footnote b to Table 141-21 to either:
 "These dispersion requirements are satisfied by fibers specified in ITU-T G.652 (low water peak, dispersion unshifted SMF) and ITU-T G.657 (bend-insensitive SMF)."
 or:
 "These dispersion requirements are satisfied by G.652.D fibers specified in ITU-T G.652 (low water peak, dispersion unshifted SMF) and G.657 Category A fibers specified in ITU-T G.657 (bend-insensitive SMF)."
 or:
 "These dispersion requirements are satisfied by G.652.D fibers specified in ITU-T G.652 (low water peak, dispersion unshifted SMF) and G.657.A fibers specified in ITU-T G.657 (bend-insensitive SMF)."
 and change the reference in 1.3 to be for the 2016 version of G.657
 Proposed Response Response Status O

Comments Received

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Cl 141 SC 141.10.4.1 P87 L24 # 101
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The PICS proforma tables in 141.10.4.1 do not have the appropriate entries in the "Support" column.
 Same issue in 141.10.4.42 (OM10), 142.5.4, 142.5.5, 143.5.4.2, 144.5.4.1, 144.5.4.2, 144.5.4.4, 144.5.4.5
 SuggestedRemedy
 In 149.11.4.1, 141.10.4.42 (OM10), 142.5.4, 142.5.5, 143.5.4.2, 144.5.4.1, 144.5.4.2, 144.5.4.4, 144.5.4.5 for items with status of:
 "M" change the Support entry to "Yes []"
 "O" change the Support entry to "Yes [] No []"
 "Something:M" change the Support entry to "Yes [] N/A []"
 "Something:O" change the Support entry to "Yes [] No [] N/A []"
 "O.Number" change the Support entry to "Yes [] No []"
 "O/Number" change the Support entry to "Yes [] No []"
 Proposed Response Response Status O

Cl 141 SC 141.10.4.42 P101 L43 # 102
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 PICS items begin with a "*" when they are referenced by another PICS item in the Status column. "OM10" does not appear in any other Item, so should not begin with a "*"
 SuggestedRemedy
 Change "**OM10" to "OM10"
 Proposed Response Response Status O

Cl 142 SC 142 P103 L0 # 290
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 There are change bars on the header and footer that should not be there.
 SuggestedRemedy
 Remove change bars on pages 103 through 179
 Proposed Response Response Status O

Cl 142 SC 142.1 P103 L19 # 289
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 25.78125
 To: 25.781 25
 Also on P107 L27, P107 L31, P109 L41, P138 L17, P138 L18,
 Proposed Response Response Status O

Cl 142 SC 142.1 P105 L1 # 371
 Dawe, Piers Mellanox
 Comment Type ER Comment Status X
 Per style manual "WGs should create their figures using programs that create vector output".
 SuggestedRemedy
 Import the figure a different way, or draw it in Frame. Same for figs 142-5 to 9, 13 to 16 and 18, 143-1 to 9, 12, 13, 15 and 16, 144-3 to 18, 20 to 29, 31 to 34, and 142A-1.
 Proposed Response Response Status O

Cl 142 SC 142.1 P105 L1 # 267
 Kramer, Glen Broadcom
 Comment Type T Comment Status X
 1) BER Monotor block is missing in Figure 142-2.
 2) The PCS Synchronization and Receive Process shall be titled simply PCS Synchronizer Process.
 3) The receive and transmit paths need to be labelled.
 4) The bidirectional arrows going to 64B/66B encoder, scrambler, and transcoder are confusing. Each of these functions provides output different than its input. Two separate arrows make it more accurate.
 SuggestedRemedy
 Update the figure 142-2 as shown in kramer_3ca_3_0719.pdf
 Proposed Response Response Status O

Cl 142 SC 142.1.1.1 P103 L29 # 490
 Law, David Hewlett Packard Enterprise
 Comment Type TR Comment Status X
 There is no operator precedence defined in subclause 142.1.1.1 'State diagrams' or the referenced subclause 21.5. It is therefore unclear if an equations such as ClkXfr AND ParityLeft > 0 used on the transition from the OUTPUT_PARITY_PLACEHOLDERS state back to the OUTPUT_PARITY_PLACEHOLDERS state in Figure 142-11 'PCS Framer Process State Diagram' means (ClkXfr AND ParityLeft) > 0 or ClkXfr AND (ParityLeft > 0).
 SuggestedRemedy
 Add brackets as necessary to clarify the order used to evaluate state diagram transition conditions.
 Proposed Response Response Status O

Cl 142 SC 142.1.1.1 P103 L34 # 491
 Law, David Hewlett Packard Enterprise
 Comment Type TR Comment Status X
 Subclause 142.1.1.1 'State diagrams' states that 'The notation used in the state diagrams follows the conventions in 21.5.' yet Figure 142-10 'PCS Input Process State Diagram', as an example, uses TxPrev = IBI_EQ AND TxNext != IBI_EQ on the transition from NEXT_VECTOR state to the RESET_XBUF state. According to the referenced subclause 21.5 the '*' symbol is used to represent a Boolean AND (see Table 21-1). Other state diagrams within the IEEE P802.3ca correctly follow the 21.5 conventions, such as Figure 144-5 'Control Parser state diagram'.
 SuggestedRemedy
 Consistently follow the conventions in 21.5 throughout the IEEE P802.3ca draft.
 Proposed Response Response Status O

Cl 142 SC 142.1.1.3 P105 L3 # 133
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 In Figure 142-2 the statement "@ 2x390.625 MHz" (2x) is only correct for 25GMII. The illustration specifies xMII and should therefore be rate agnostic.
 Same issue for "@97.65625 MHz" (3x), and "@(25781.25/257)" (3x). Furthermore, while the block sizes are useful they disagree with Figure 142-5.
 SuggestedRemedy
 Replace the "@xxx" in the figure with notes as follows:
 1) For 25GMII rate is 2x390.625 MHz, for XGMII rate is 2x156.25 MHz.
 2) For 25 Gb/s PCS rate is 97.65625 MHz, for 10 Gb/s PCS rate is 39.0625 MHz.
 3) For 25 Gb/s PCS rate is (25781.25/257) MHz, for 10 Gb/s PCS rate is (10.3125/257) MHz.
 Proposed Response Response Status O

Cl 142 SC 142.1.1.3 P105 L16 # 134
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Misalignment between Fig 142-2, 142-5 and text. Mostly in block sizes transferred between major blocks/fifos.
 SuggestedRemedy
 Add a note to the figure "Note: block sizes exclude control bits passed between the PCS Input Process, PCS Framer Process and PCS Transmit Process that are not sent to the PMA.
 Proposed Response Response Status O

Cl 142 SC 142.1.1.3 P105 L42 # 372
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 "data_vector<m:n> accesses bits n through m inclusively. The nth bit is received earlier than the mth bit.": this is too perverse. Isn't the something.7:0 style that we see in e.g. Clause 45 because the big end is "first"?
 SuggestedRemedy
 Try not to write it more weird than Ethernet bit ordering already is
 Proposed Response Response Status O

Comments Received

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Cl 142 SC 142.1.1.3 P105 L45 # 373
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 This says "Refer to 3.1 for the conventions on bit ordering." 3.1 itself doesn't help, 3.1.1 shows LSB first, specifically for the MAC.
 SuggestedRemedy
 What is this trying to tell us in the context of a PCS, not a MAC?
 Proposed Response Response Status O

Cl 142 SC 142.1.1.4 P105 L51 # 30
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "straightforward and can be replaced by addition" with "straightforward and may be replaced by addition"
 Proposed Response Response Status O

Cl 142 SC 142.1.1.4 P106 L1 # 494
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X post-deadline
 Is there a reason to create a separate set of "State diagram operators"? Clause 1.2.1 lists "State diagram conventions", where some of the operators are defined. If additions were made, state diagrams could reference a consistent definition across the standard - at least moving forward.
 SuggestedRemedy
 Merge new operators into a Clause 1.2.1. Reference this clause.
 Proposed Response Response Status O

Cl 142 SC 142.1.1.4 P106 L31 # 493
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X post-deadline
 Decrement operator has no apparent space between first "-" and second "-".
 SuggestedRemedy
 Use a dash character or font with a break between characters.
 Proposed Response Response Status O

Cl 142 SC 142.1.1.5 P107 L6 # 374
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 in this standard
 SuggestedRemedy
 in this clause
 Proposed Response Response Status O

Cl 142 SC 142.1.2 P107 L27 # 375
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 As this is the first use of EQT in this clause, and this is the first project to use EQT
 SuggestedRemedy
 Say what it is, e.g. with a cross-reference.
 Proposed Response Response Status O

Cl 142 SC 142.1.2 P107 L34 # 135
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "aforementioned delay limits" should be "aforementioned delay variation limits"
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Comments Received

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Cl 142 SC 142.1.3 P107 L28 # 291
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 10.3125
 To: 10.312 5
 Also on P107 L32, P109 L42, P138 L18, P138 L19,
 Proposed Response Response Status O

Cl 142 SC 142.1.3 P108 L4 # 136
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 This text is duplicated 4-5 lines above.
 SuggestedRemedy
 Strike the duplicate text
 Proposed Response Response Status O

Cl 142 SC 142.1.3.1 P109 L24 # 449
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 This sub-clause uses the notation 0x1-(55)32. Is this sub-script notation defined in the standard? Is it used anywhere else?
 SuggestedRemedy
 Possible remedies:
 1) Make a comment (similar to 49.2.4.1 Notation conventions) that "The subscript in the above sentence means ..."
 2) Simply write out the whole value without short-hand notation
 Proposed Response Response Status O

Cl 142 SC 142.1.3.1 P109 L24 # 376
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 0x1-(55)32 - eh?
 SuggestedRemedy
 Is that 55 in base 32, or 55 repeated 32 times, or what? Be clearer.
 Proposed Response Response Status O

Cl 142 SC 142.1.3.1 P109 L28 # 450
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 Use of hyphens in a hex value is somewhat rare in the standard (101.3.3.1.6 contains some value that include hypens; 103.3.5.1 also). Most of the time hex values are written without hyphens. Consider to remove the hyphens.
 SuggestedRemedy
 Possible remedies:
 1) Replace "0x1-BF-40-18-...." with "0x1BF4018...."
 2) Create a table like "Table 119-2 - 400GBASE-R alignment marker encodings" that contains the values, delimited with commas
 Proposed Response Response Status O

Cl 142 SC 142.2 P109 L39 # 377
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 As 802.3 uses "b/s" for the payload rate (MAC data rate), saying "25.78125 Gb/s rate" is misleading.
 SuggestedRemedy
 25.78125 GBd Several similar instances.
 Proposed Response Response Status O

Cl 142 SC 142.2 P111 L1 # 452

Nicholl, Shawn

Xilinx

Comment Type E Comment Status X

Blurry diagrams. "Figure 142-5 Transmit bit ordering" is blurry. "Figure 142-6 FEC encoder" is blurry. "Figure 142-9 Omega Network 256 Interconnection Network" is blurry. Other diagrams are blurry.

SuggestedRemedy

Generate new figures that are crisp.

Proposed Response Response Status O

Cl 142 SC 142.2.1 P110 L7 # 137

Rerein, Duane

Futurewei Technologies, Inc.

Comment Type E Comment Status X

While this is a nice nostalgic carry-over from the previous century the term "tx_raw" is not defined in the clause and really adds no value.

SuggestedRemedy

Strike both instance of "tx_raw" (here and on pg 124 line 42).

Proposed Response Response Status O

Cl 142 SC 142.2.1 P110 L24 # 138

Rerein, Duane

Futurewei Technologies, Inc.

Comment Type ER Comment Status X

We have "Inter-Burst Idle", "inter-burst idle", and "inter-burst idle pattern", "inter-burst idle EQ (IBI_EQ)". I believe these are almost, but not quite, same thing.

SuggestedRemedy

Make the following changes:

- Pg 110 line 24 - OK as is, "Inter-Burst Idle" is defined as a control code denoted as /IBI/
- Pg 121 line 32 - change "The IBI258 constant holds the value of the inter-burst idle pattern" to "The IBI258 constant holds the value equivalent to the Inter-Burst Idle pattern"
- Pg 124 line 53 - change "inter-burst idle (IBI)" to "IBI258 (Inter-Burst Idle pattern equivalent)"
- Pg 161 line 50 - change "this channel generates only inter-burst idles towards the xMII." to "the MCRS generates only IBI_EQ for this channel towards the xMII."
- Pg 163 all lines OK as is.

Proposed Response Response Status O

Cl 142 SC 142.2.2 P110 L36 # 268

Kramer, Glen

Broadcom

Comment Type TR Comment Status X

The following statement is ambiguous:

"In the OLT, at the beginning of each burst, the descrambler is initialized with the lower 58 bits of the unscrambled value of IBI_EQ, i.e., bits s[0] through s[57] as shown in Figure 142-14 (see 143.3.3.3)."

This specific reference to IBI_EQ (143.3.3.3) points to 72-bit version (Value: 0x0A-0A-0A-0A-0A-0A-0A-0A-FF), and so, the low 58 bits would be 0x2-0A-0A-0A-0A-0A-0A-0A-FF

However, the original intention was to use the 64B/66B encoded value of IBI_EQ, because the scrambler ever sees only the 64b/66b encoded blocks. So, if we assume that the seed should be the 64B/66B encoded IBI_EQ, then it would have the following value:

0x2-85-42-A1-50-28-14-1E
(full 64b/66b Encoded IBI_EQ: 0x0A-85-42-A1-50-28-14-1E)

In either case, it is just an unnecessarily indirect definition for what needs to be a pre-defined constant. We shall clarify the value to be used and simply specify a 58-bit seed constant.

SuggestedRemedy

Use the following text on page 110, lines 35-36:

"In the ONU, at the beginning of each burst, the scrambler is initialized with the value of 0x3-FF-FF-FF-FF-FF-FF-FF, i.e., each of the bits s0 through s57 is set to 1 (see Figure 49-8)."

Use the following text on page 128, lines 34-35:

"In the OLT, at the beginning of each burst, the descrambler is initialized with the value of 0x3-FF-FF-FF-FF-FF-FF-FF, i.e., each of the bits s0 through s57 is set to 1 (see Figure 49-8)"

Proposed Response Response Status O

Cl 142 SC 142.2.3 P110 L40 # 451

Nicholl, Shawn

Xilinx

Comment Type E Comment Status X

Consider to clarify that the four input blocks to the transcoder are already scrambled.

SuggestedRemedy

Replace "four consecutive 64B/66B" with "four consecutive scrambled 64B/66B"

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.2.4.1 P112 L1 # 139

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

In most cases we use "parity-check" (with a hyphen). Here and in a few other locations we omit the hyphen. We should be consistent.

SuggestedRemedy

Change the following instances of "parity check" with "parity-check":

pg line
112 1
114 48
115 1
116 12

Proposed Response Response Status O

Cl 142 SC 142.2.4.1 P112 L3 # 292

Wienckowski, Natalie General Motors

Comment Type E Comment Status X

Missing non-breaking spaces in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.

SuggestedRemedy

Change: = 3072 x 17664
To: = 3 072 x 17 664

Proposed Response Response Status O

Cl 142 SC 142.2.4.1 P112 L4 # 140

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

The "H" in "... matrix H composed by a ..." and "Ai,j" in "256 sub-matrices Ai,j:" should be in italics. Same for other occurrences in these terms, "ai,j", "(l,j)", "Hc", "Z", "K", "Kmax", "S", "P", "M", "N", "Nmax", "R", "Rmax", "u", "u1", "u2", "uK", "p", "p1", "p2", "pM", "T", "c", "i", and "k" (in K+1) scatter throughout the text and Figure 142-6 in Cl 142.2.4 and it's sub-clauses. Also in Figure 142-13—FEC decoder.

SuggestedRemedy

per comment

Proposed Response Response Status O

Cl 142 SC 142.2.4.1 P112 L13 # 31

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status X

"can" used and not intended per Style Guide

SuggestedRemedy

Change "The parity-check matrix can be described in its compact form" to "The parity-check matrix is described in its compact form"

Proposed Response Response Status O

Cl 142 SC 142.2.4.1 P114 L39 # 442

Powell, William Nokia

Comment Type T Comment Status X

Replace this note:
"Editor's Note (to be removed prior to publication): Link to the CSV file containing machine readable files to be added here prior to publication."

SuggestedRemedy

with:
"Editor's Note - Later move this file to: <http://standards.ieee.org/downloads/802.3/> "

Proposed Response Response Status O

Cl 142 SC 142.2.4.1 P114 L39 # 276

Marris, Arthur Cadence Design Systems

Comment Type ER Comment Status X

Delete "Editor's Note (to be removed prior to publication): Link to the CSV file containing machine readable files to be added here prior to publication."

SuggestedRemedy

Delete "Editor's Note (to be removed prior to publication): Link to the CSV file containing machine readable files to be added here prior to publication."

Similar problem on page 249 line 51.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.2.4.2 P114 L49 # 293
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 14592
 To: 14 592
 Also on P114 L54
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P115 L5 # 296
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 16962
 To: 16 962
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P114 L51 # 294
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 17664
 To: 17 664
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P116 L5 # 141
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 What does (Pi to the -1 power)"info(u*)" and (Pi)parity(p)" mean?
 SuggestedRemedy
 Add a definition of this term. Unfortunately I have no idea what such a definition would be so I can offer no informed suggestions
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P114 L53 # 295
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 14392
 To: 14 392
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P116 L5 # 379
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 I don't know what you mean by pi-1info. Similar problem at line 9.
 SuggestedRemedy
 Explain, or better, use more familiar notation
 Proposed Response Response Status O

Comments Received

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Cl 142 SC 142.2.4.2 P116 L7 # 380
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 What is then interleaved? p" or H?
 SuggestedRemedy
 ?
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P116 L16 # 142
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 This seems a bit confusing "the M-bit FEC parity bits"
 SuggestedRemedy
 Change to "the M FEC parity bits" (M in italics)
 Proposed Response Response Status O

Cl 142 SC 142.2.4.2 P116 L18 # 381
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 is comprised of
 SuggestedRemedy
 comprises
 consists of
 contains
 is composed of
 or possibly other alternatives
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P116 L24 # 143
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 It strikes me a odd that the De-interleaver should refer to encoding and the Interleaver to decoding as stated in the following:
 "For the purposes here: "De-interleaver" refers to the mapping from transmitted sequence to encoding/decoding sequence (including user and parity). ... "Interleaver" refers to the mapping from encoding/decoding sequence to transmitted sequence."
 SuggestedRemedy

Change to:
 "For the purposes here: "De-interleaver" refers to the mapping from transmitted sequence to decoding sequence (including user and parity). ... "Interleaver" refers to the mapping from encoding sequence to transmitted sequence."
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P116 L25 # 382
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 I don't know what you mean by "Omega networks".
 SuggestedRemedy
 Define what you are talking about. If it doesn't matter, don't mention them.
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P116 L29 # 144
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 We seem to have a mix of "De-interleaver", "de-interleaver", "Interleaver", and "interleaver".
 SuggestedRemedy
 Be consistent. Change all to initial Caps
 Proposed Response Response Status O

Comments Received

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Cl 142 SC 142.2.4.3 P117 L48 # 383
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 I don't know what you mean this partial square bracket; it is not explained here or in 1.2 Notation
 SuggestedRemedy
 Use accessible notation instead: rounddown() or whatever is meant.
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 481
 Slavick, Jeff Broadcom
 Comment Type TR Comment Status X
 Editor's note states it should have been removed before WG ballot with URL
 SuggestedRemedy
 Replace with proper URL
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 443
 Powell, William Nokia
 Comment Type T Comment Status X
 Replace this note:
 "Editor's Note (to be removed prior to publication): Before entering WG ballot, content of individual seed tables will be published under <http://standards.ieee.org/downloads/802.3/> in a machine readable format"
 SuggestedRemedy
 with:
 "Individual seed tables can be found at:
<http://www.ieee802.org/3/ca/private/xxx>
 [NEED SEED TABLES PLACED AT LINK ABOVE]
 [and later move it to <http://standards.ieee.org/downloads/802.3/>]
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 277
 Marris, Arthur Cadence Design Systems
 Comment Type TR Comment Status X
 Address the following:
 "Editor's Note (to be removed prior to publication): Before entering WG ballot, content of individual seed tables will be published under <http://standards.ieee.org/downloads/802.3/> in a machine readable format"
 SuggestedRemedy

Address the following:
 "Editor's Note (to be removed prior to publication): Before entering WG ballot, content of individual seed tables will be published under <http://standards.ieee.org/downloads/802.3/> in a machine readable format"
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 111
 Lusted, Kent Intel
 Comment Type TR Comment Status X
 The editors note states that the machine readable form of the seed tables are posted at <https://standards.ieee.org/downloads.html>. However, the files for 802.3ca are not posted as of 30 May 2019
 SuggestedRemedy
 Post the seed files and remove the editors note.
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 103
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The editor's note says that "Before entering WG ballot, content of individual seed tables will be published under <http://standards.ieee.org/downloads/802.3/> in a machine readable format"
 However, the draft is in WG ballot and the location <http://standards.ieee.org/downloads/802.3/> is where files for published standards reside.
 SuggestedRemedy
 Publish the files on the P802.3ca web page and include the location with a note and Editor's note equivalent to those on Page 114 lines 36 to 41
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 145
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 The information per the Editorial note has not been published at the advertised URL. Liar, Liar pants on fire!
 SuggestedRemedy
 Post the seed tables at the advertised URL or Post the seed table at some other URL updating the Ed Note appropriately or change "Before entering WG ballot" to "Prior to publication".
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L1 # 384
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 This says "Before entering WG ballot, content of individual seed tables will be published under <http://standards.ieee.org/downloads/802.3/> in a machine readable format". But I don't see them there.
 SuggestedRemedy
 Sort it out.
 Proposed Response Response Status O

Cl 142 SC 142.2.4.3 P118 L35 # 453
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 Are the hyphen's necessary in Tables 142-5, 142-6? Consider to remove them to be more consistent with other tables in the standard (eg. Table 52-20, Table 115-1, Table 120-2)
 SuggestedRemedy
 Remove the hyphens from values in the tables 142-5, 142-6.
 Proposed Response Response Status O

Cl 142 SC 142.2.5 P120 L52 # 146
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Here we state "bit 257 conveying the origin of the block to be either the PCS Input Process (bit 257 is equal to 1) or the PCS Frammer Process (bit 257 is equal to 0)0). The value of bit 257 being one implies that the 257-bit block has been transcoded and scrambled."
 Elsewhere we state (pg/ln)
 121/51 "The value of bit 257 being one implies that the 257-bit block has been transcoded and scrambled."
 123/22 "a binary one indicating the 257-bit block originated in the PCS Input Process"
 124/46 "A single bit indicating the accompanying 256B/257B block has been scrambled is appended to the block which is then stored in the InputFifo."

We should be consistent in what this bit indicates.
 SuggestedRemedy
 At 120/52 (pg/ln) change:
 "Various variables and buffers in the PCS are structured as 258-bit wide blocks with bits 0 through 256 holding one line-coding unit (a 257-bit block) and bit 257 conveying the origin of the block to be either the PCS Input Process (bit 257 is equal to 1) or the PCS Frammer Process (bit 257 is equal to 0)0). The value of bit 257 being one implies that the 257-bit block has been transcoded and scrambled." to:
 "Various variables and buffers in the PCS are structured as 258-bit wide blocks. Bits 0 through 256 of these 258-bit block hold one line-coding unit (a 257-bit block) and bit 257 indicates the 257-bit block has been transcoded and scrambled (bit 257 is equal to 1) or that the block has not been transcoded and scrambled (bit 257 is equal to 1). The value of bit 257 also implies the origin of the block as being either the PCS Input Process (bit 257 is equal to 1) or the PCS Frammer Process (bit 257 is equal to 0)."
 At 121/51 change:
 "The value of bit 257 being one implies that the 257-bit block has been transcoded and scrambled." to:
 "The value of bit 257 being one indicates that the 257-bit block has been transcoded and scrambled."
 At 123/22 change:
 "a binary one indicating the 257-bit block originated in the PCS Input Process" to:
 "a binary one indicating the 257-bit block has or has not been transcoded and scrambled."
 At 124/46 change:
 "A single bit indicating the accompanying 256B/257B block has been scrambled ..." to:
 "A single bit indicating the accompanying 256B/257B block has been transcoded and scrambled ..."
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.2.5.1 P121 L14 # 454
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 Value is set to "0x3-CA". Seems like an unconventional use of hyphen.
 SuggestedRemedy
 Replace "0x3-CA" with "0x3CA"
 Proposed Response Response Status O

Cl 142 SC 142.2.5.2 P122 L26 # 330
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Missing crossref formatting for "142.1.1.5". Same for line 41.
 SuggestedRemedy
 Make them into proper cross references.
 Proposed Response Response Status O

Cl 142 SC 142.2.5.1 P121 L30 # 488
 Law, David Hewlett Packard Enterprise
 Comment Type T Comment Status X
 The meaning of '0x0-(0A)subscript32' is unclear. According to IEEE Std 802.3-2018 subclause 1.2.5 'Hexadecimal notation' 'Numerical values designated by the 0x prefix indicate a hexadecimal interpretation ...' and 'Numerical values designated with a 16 subscript indicate a hexadecimal interpretation of the corresponding number.'. This therefore seems to imply that the 32 subscript indicates a base 32 number, which I doubt is correct. Instead I suspect that this is meant to indicate 0x0A repeated 32 times, but I don't see where that convention is defined.
 SuggestedRemedy
 Specify the meaning of '0x0-(0A)subscript32'.
 Proposed Response Response Status O

Cl 142 SC 142.2.5.2 P123 L36 # 331
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Missing period after "TxFifo"
 SuggestedRemedy
 Add the period at the end of the sentence.
 Proposed Response Response Status O

Cl 142 SC 142.2.5.1 P121 L33 # 455
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 Use of subscript of 32 for the value of IBI258 and also PAR_PLACEHLDR. Similar to previous comment, need to define/explain the notation.
 SuggestedRemedy
 Possible remedies:
 1) Make a comment (similar to 49.2.4.1 Notation conventions) that "The subscript in the above sentence means ..."
 2) Simply write out the whole value without short-hand notation
 Proposed Response Response Status O

Cl 142 SC 142.2.5.3 P123 L3 # 147
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 It would be a kindness to the reader to inform them why "The MSB of each cell is set to zero".
 SuggestedRemedy
 Add to the end of the sentence " indicating the 257-bit block has or has not been transcoded and scrambled."
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.2.5.3 P124 L11 # 148
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Is the "v" in "of a 72-bit block v" in italics? It doesn't appear to be.
 Same issue at line 14, 22, & 34 ("a[4]" in this case).
 SuggestedRemedy
 Ensure the "v" is italicized.
 Proposed Response Response Status O

Cl 142 SC 142.2.5.4.3 P125 L17 # 149
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Missing "the", "a", or "an"
 SuggestedRemedy
 Change
 "not transmitting, laser is turned on" to
 "not transmitting, the laser is turned on"
 Proposed Response Response Status O

Cl 142 SC 142.2.5.4.1 P126 L36 # 104
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The PROCESS_DATA state contains 4 instances of "<=" that should be the "Assignment operator" as per the first two rows
 SuggestedRemedy
 In the PROCESS_DATA state change 4 instances of "<=" to the "Assignment operator" as per the first two rows
 Proposed Response Response Status O

Cl 142 SC 142.3 P125 L37 # 333
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 The first of the hypen-bullet lines ends in a period, the other two do not (lines 38 and 39).
 SuggestedRemedy
 Editor to choose how to have consistent (or appropriate) line ending for all three lines.
 Proposed Response Response Status O

Cl 142 SC 142.2.5.4.2 P125 L5 # 332
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 The hypen for the line break looks awkward.
 SuggestedRemedy
 Suggest making PAR_PLACEHOLDER unbreakable.
 Proposed Response Response Status O

Cl 142 SC 142.3 P125 L38 # 151
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 No such beast in Figure 142-2 "PCS Synchronizer Process"
 SuggestedRemedy
 Change Figure 142-2 block title from
 "PCS Synchronization & Receive Process" to
 "PCS Synchronizer Process"
 This is deemed easier than changing the text to match the figure 17x.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.3 P125 L38 # 150
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 No such beast in Figure 142-2 "PCS BER Monitor Process (see 142.3.5.6)".
 SuggestedRemedy
 Change
 "— PCS BER Monitor Process (see 142.3.5.6)" to
 "— FEC Decoder (see 142.3.1)"
 Proposed Response Response Status O

Cl 142 SC 142.3.1 P125 L43 # 152
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Does the FEC decoder really interleave?
 SuggestedRemedy
 At line 43 Change
 "interleaver/de-interleaver data path." to
 "de-interleaver data path."
 Change title of section 142.3.1.1 from:
 "Receive Interleaving" to
 "Receive De-interleaving"
 Proposed Response Response Status O

Cl 142 SC 142.3.1 P126 L20 # 484
 Slavick, Jeff Broadcom
 Comment Type TR Comment Status X
 In Figure 142-10 the exit from NEXT_VECTOR has a conflict in exit criteria. If TxPREV is IBI_EQ and TxNext becomes RATE_ADJ_EQ both the criteria to take the path to WAIT_FOR_VECTOR and RESET_XBUF would be met. So which path should you take?
 SuggestedRemedy
 Resolve the conflict
 Proposed Response Response Status O

Cl 142 SC 142.3.1.1 P126 L1 # 456
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 Font used in state diagrams appears different from most other state diagrams in the standard. This includes "Figure 142-10 PCS Input Process State Diagram", "Figure 142-11 PCS Framer Process State Diagram" and others.
 SuggestedRemedy
 Update the state diagrams to look more like other state diagrams in the standard
 Proposed Response Response Status O

Cl 142 SC 142.3.1.1 P126 L2 # 486
 Law, David Hewlett Packard Enterprise
 Comment Type T Comment Status X
 The variable BEGIN is not defined.
 SuggestedRemedy
 Add the following variable definition to subclause 142.2.5.2.
 BEGIN
 TYPE: Boolean
 Description: This variable is used when initiating operation of the functional block state diagram. It is set to TRUE following initialization and every reset.
 Proposed Response Response Status O

Cl 142 SC 142.3.1.1 P126 L36 # 487
 Law, David Hewlett Packard Enterprise
 Comment Type E Comment Status X
 The Assignment operator character defined in Table 21-1 should be used rather than the two separate symbols '<' and '='.
 SuggestedRemedy
 Replace the four instances of '<=' with the Assignment operator in the PROCESS_DATA state in Figure 142-10.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.3.1.1 P126 L36 # 495
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X post-deadline
 Four incorrect symbols are used.
 SuggestedRemedy
 Use the "assignment operator" symbol instead of "<=" in the following 3 assignments:
 xBuffer[0] <= Scramble(xBuffer[0])
 xBuffer[1] <= Scramble(xBuffer[1])
 xBuffer[2] <= Scramble(xBuffer[2])
 xBuffer[3] <= Scramble(xBuffer[3])
 Proposed Response Response Status O

Cl 142 SC 142.3.2 P126 L49 # 457
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 Consider to clarify that the four output blocks from the transcoder are still scrambled.
 SuggestedRemedy
 Replace "four consecutive 66-bit" with "four consecutive scrambled 66-bit"
 Proposed Response Response Status O

Cl 142 SC 142.3.3 P128 L34 # 153
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 This statement is confusing at best and possibly misleading: "In the OLT, at the beginning of each burst, the descrambler is initialized with the lower 58 bits of the unscrambled value of IBI_EQ, i.e., bits s[0] through s[57] as shown in Figure 142-14 (see 143.3.3.3)."
 First off there are no s[x] bits in the Fig 142-14. The S[x]_Bytes_ shown in Fig 142-14 are after the descrambler. The "i.e., i.e., bits s[0] through s[57] ..." if assumed (a bad idea but what is the reader to do) to be the individual bits of S0..S7 implies that the descrambler is initialized with whatever happens to be in the register after receiving SBD. This is unlikely to be correct. IBI_EQ is a clearly defined constant and needs no qualification from Figure 142-14.
 SuggestedRemedy
 Strike ", i.e., bits s[0] through s[57] as shown in Figure 142-14 "
 Proposed Response Response Status O

Cl 142 SC 142.3.5.1 P131 L14 # 297
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Use a non-breaking space in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual, not a comma.
 SuggestedRemedy
 Change: 16,962
 To: 16 962
 Proposed Response Response Status O

Cl 142 SC 142.3.5.2 P132 L14 # 154
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Do we test FEC CWs or decode them?
 SuggestedRemedy
 Change (2x in para)
 "a new QC-LDPC codeword is available for testing" to
 "a new QC-LDPC codeword is available for decoding"
 Proposed Response Response Status O

Cl 142 SC 142.3.5.2 P132 L38 # 155
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Well close. MatchCount doesn't track all matches only those before the ONU is in sync
 SuggestedRemedy
 Change:
 "This counter tracks the number of consecutive successful detections of FEC codeword delimiters (FEC_CW_DELIM)." to
 "This counter tracks the number of consecutive successful detections of FEC codeword delimiters (FEC_CW_DELIM) while the ONU is not synchronized to the proper 257-bit block boundary."
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.3.5.2 P133 L2 # 156
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Persistent-FecFail crosses the line and shouldn't.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 142 SC 142.3.5.2 P134 L25 # 386
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 What PMA_UNITDATA.indication primitive?
 SuggestedRemedy
 I could not find the PMA service interface definition. Add it.
 Proposed Response Response Status O

Cl 142 SC 142.3.5.2 P133 L29 # 157
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 This statement is clearly not true (see 142.1.3.1) "Once provisioned, this value does not change and is treated as constant by the state diagram."
 SuggestedRemedy
 Strike.
 Proposed Response Response Status O

Cl 142 SC 142.3.5.3 P133 L51 # 159
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 This is the only instance of "de-coding". There are ~27 instances of decode (or some form of decode).
 SuggestedRemedy
 Remove the hyphen.
 Proposed Response Response Status O

Cl 142 SC 142.3.5.2 P133 L35 # 158
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 PMA_SIGNAL.indication(SIGNAL_OK) crosses the line and shouldn't
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 142 SC 142.3.5.3 P134 L5 # 358

Hajduczenia, Marek Charter Communications

Comment Type TR Comment Status X

FecDecode description is a tad cryptic. The FecDecode function to passes one complete FEC codeword cw to the FEC Decoder. The FEC codeword may be full-length or shortened. The codeword length is intrinsic to the parameter cw. Looking at Figure 142-16, this function is just called, but then I guess it is assumed that it generates the output of OutputFifo since that is what is used as input data stream in Figure 142-18. That relationship is not described anywhere, though.

SuggestedRemedy

To make things simpler to read between state diagrams, it is recommended to make FecDecode function write into OutputFifo explicitly

Option one (preferred), add statement "OutputFifo.Append(FecDecode(RxCwBuf)) in RX_FULL_CW state in Figure 142-16 and Figure 142-15, as well as in state RX_SHORT_CW in Figure 142-15 + Add the following statement at the end of the definition of FecDecode function. "On completion of the FEC decoding operation, the FecDecode function returns a series of 257-bit blocks appended to the OutputFifo."

Option two (less explicit): add only statement in definition of FecDecode function as follows: "On completion of the FEC decoding operation, the FecDecode function returns a series of 257-bit blocks appended to the OutputFifo." - this option still requires a reader to make a connection between two state diagrams via description of the function

Proposed Response Response Status

Cl 142 SC 142.3.5.3 P134 L25 # 160

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

PMA_UNITDATA.indication(rx_code_group<256:0>) crosses the line and shouldn't

SuggestedRemedy

per comment

Proposed Response Response Status

Cl 142 SC 142.3.5.4 P134 L36 # 334

Laubach, Mark Broadcom

Comment Type E Comment Status X

Missing period, end of last sentence of paragrpah.

SuggestedRemedy

Add the period.

Proposed Response Response Status

Cl 142 SC 142.3.5.4 P135 L13 # 357

Hajduczenia, Marek Charter Communications

Comment Type TR Comment Status X

PCS_BLK_SZ is not defined right now and it does not seem like we have any .

SuggestedRemedy

Seems the following simple definition in XXX would suffice

PCS_BLK_SZ

Type: unsigned integer

Description: The PCS_BLK_SZ constant holds the size of the PCS data block.

Value: 257

Proposed Response Response Status

Cl 142 SC 142.3.5.4 P135 L15 # 485

Slavick, Jeff Broadcom

Comment Type TR Comment Status X

In Figure 141-15 the exit from GET_NEXT_BLOCK has a conflict in exit criteria. If SignalFail and MatchFound are both true which path do you take?

SuggestedRemedy

Change the path to CHECK_CW_LEN to be "!SignalFail AND Matchfound..."

Proposed Response Response Status

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.3.5.7 P136 L45 # 163
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Missing "the"
 SuggestedRemedy
 Change "of Output Process" to "of the Output Process"
 Proposed Response Response Status O

Cl 142 SC 142.4 P137 L53 # 385
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 Missing text
 SuggestedRemedy
 Introduce / summarise the PMA
 Proposed Response Response Status O

Cl 142 SC 142.3.5.7 P137 L4 # 164
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Figure needs clean-up; Block divider line overrun block boundaries, connectors often don't touch blocks.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 142 SC 142.4.1 P137 L3 # 387
 Dawe, Piers Mellanox
 Comment Type TR Comment Status X
 This isn't an adequate definition of "differential encoding".
 SuggestedRemedy
 Define it properly, including: What is it for? When is it used or useful? What is it - is it "precoding"? Are Xi and Yi bits, 257-bit vectors, or what? What is "Register" - a 1-bit delay? Define what you mean by a + in a circle.
 Proposed Response Response Status O

Cl 142 SC 142.3.5.7 P137 L42 # 368
 Hajduczenia, Marek Charter Communications
 Comment Type TR Comment Status X
 in Figure 142-18, PayloadLeft variable is initialized in WAIT_FOR_DATA state with FEC_PAYLOAD_SIZE constant, defined in 142.2.5.1 as 56 units of 257-bit blocks. PayloadLeft is, however, decremented every 72 bit-block in OUTPUT_72B_BLOCK state, which means it runs 4 times faster than expected. It will lead to exhaustion of counter ahead of time, and termination of the FEC payload decoding process prematurely.
 SuggestedRemedy
 Move "PayloadLeft --" operation from OUTPUT_72B_BLOCK to PROCESS_257B_Block, where it will be counting in 257-bit blocks recovered from FEC payload, at the rate that is expected
 Proposed Response Response Status O

Cl 142 SC 142.4.1 P138 L3 # 165
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 What is an "OLT TX PMA"?
 SuggestedRemedy
 Change to "OLT transmit PMA"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.4.1 P138 L4 # 166
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 This sentence is poorly worded:
 "Differential encoding is optional to use by setting the control bit in the register, as defined in Clause 45 register 1.29.15 (see 45.2.1.23a.2)."
 SuggestedRemedy
 Change
 "Differential encoding is optional to use by setting the control bit in the register, as defined in Clause 45 register 1.29.15 (see 45.2.1.23a.2)." to
 "Use of differential encoding is optional. Setting the register control bit 1.29.15 (see 45.2.1.23a.2) to a one enables the encoding."
 Proposed Response Response Status O

Cl 142 SC 142.4.2 P138 L9 # 167
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 What is an "OLT RX PMA function"?
 SuggestedRemedy
 Change:
 "Differential decoding shall be implemented in the ONU PMA RX function as shown in Figure 142–20." to
 "Differential decoding shall be implemented in the as shown in Figure 142–20 in the ONU receive PMA."
 Proposed Response Response Status O

Cl 142 SC 142.4.2 P138 L10 # 168
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Change "RX" to "receive"
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 142 SC 142.4.2 P138 L11 # 169
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Clause 45 does not contain "ONU registers"
 SuggestedRemedy
 Change
 "mapped to Clause 45 ONU register 1.29.15" to
 "mapped to Clause 45 register bit 1.29.15 (see 45.2.1.23a.2)"
 use live link for xRef.
 Proposed Response Response Status O

Cl 142 SC 142.4.2 P138 L12 # 335
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Missing period, end of last sentence of paragraph.
 SuggestedRemedy
 Add the period.
 Proposed Response Response Status O

Cl 142 SC 142.4.4.1 P138 L13 # 170
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Per Clause 1.5 CDR mean clock and data recovery not clock data recovery
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 142 SC 142.5.5.4 P135 L2 # 161
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 Several SDs are not searchable in pdf files (i.e., are imported from some foreign drawing tool).
 SuggestedRemedy
 Redraw SDs in frame native drawing format if not already so.
 Proposed Response Response Status O

Cl 142 SC 142.5.5.5 P135 L37 # 162
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 This statement is not quite accurate "In the ONU, shortened FEC codewords are disallowed."
 SuggestedRemedy
 Change
 "In the ONU, shortened FEC codewords are disallowed."
 "In the ONU receive path, shortened FEC codewords are disallowed."
 Proposed Response Response Status O

Cl 142A SC 142A.1 P249 L51 # 445
 Powell, William Nokia
 Comment Type TR Comment Status X
 Replace this note:
 "Editor's Note (to be removed prior to publication): Link to the CSV file containing machine readable files to be added here prior to publication."
 SuggestedRemedy
 with:
 An example set of LDPC test vectors can be found at:
http://www.ieee802.org/3/ca/private/machine-readable/3ca_LDPC_test_vectors.zip in machine readable format.
 [later move it to <http://standards.ieee.org/downloads/802.3/>]
 Proposed Response Response Status O

Cl 142A SC 142A.2 P249 L37 # 270
 Kramer, Glen Broadcom
 Comment Type E Comment Status X
 Caption number is missing "14". Just says "2A.2"
 SuggestedRemedy
 Add missing text
 Proposed Response Response Status O

Cl 142A SC 142A.2 P249 L37 # 482
 Slavick, Jeff Broadcom
 Comment Type E Comment Status X
 The sub-clause shows as "2A.2" instead of 142A.2
 SuggestedRemedy
 Fix it
 Proposed Response Response Status O

Cl 142A SC 142A.2 P249 L37 # 110
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 The heading "2A.2 QC-LDPC FEC Encoder Test Vectors" should be "142A.2" not "2A.2"
 SuggestedRemedy
 In the heading "2A.2 QC-LDPC FEC Encoder Test Vectors" change "142A.2" to "2A.2"
 (Re-apply the heading style AH1,A.1)
 Proposed Response Response Status O

Cl 142A SC 142A.2 P249 L51 # 483
 Slavick, Jeff Broadcom
 Comment Type E Comment Status X
 machine is mis-spelled in editors note
 SuggestedRemedy
 Fix it
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 143 SC 143.1 P143 L6 # 259

D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei

Comment Type TR Comment Status X

Multi-channel Reconciliation Layer introduced - noted as connection between multiple macs and PHYs. There is no definition provided in 1.4, and if you look at the MCRS in Fig 143-1 - it is a mapping function that reconciles the signals at a specific Media Independent Interface (MII) to the specific Media Access Control (MAC)-Physical Signaling Sublayer (PLS) service definitions.

SuggestedRemedy

Action 1 - add definition to 1.4 Multi-Channel Reconciliation Layer provide a mapping function that reconciles the signals at a specific Media Independent Interface (MII) to a specific Media Access Control (MAC)-Physical Signaling Sublayer (PLS) service definitions.

Action 2 - change text in 143.1 -This clause describes the Multi-Channel Reconciliation Sublayer (MCRS) which enables multiple MACs to interface with multiple Physical Layers.

to
This clause describes the Multi-Channel Reconciliation Sublayer (MCRS) which enables multiple MACs to interface with multiple MII's.

Proposed Response Response Status O

Cl 143 SC 143.1 P143 L37 # 258

D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei

Comment Type E Comment Status X

The figure is not consistent with other similar figures as noted in other comments, and the text associated with the MII is illegible.

SuggestedRemedy

redraw figure to be consistent with diagrams such as 56-1, 56-2, 56-3, 56-4.

Proposed Response Response Status O

Cl 143 SC 143.2.4.2 P145 L23 # 32

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status X

"can" used and not intended per Style Guide

SuggestedRemedy

Change "and can contain at most two partial frames" to "and may contain at most two partial frames"

Proposed Response Response Status O

Cl 143 SC 143.2.4.4 P146 L40 # 336

Laubach, Mark Broadcom

Comment Type E Comment Status X

"46.2.1" should be forest green. Same for Page 154, line 52 for "46.1.7.2"

SuggestedRemedy

Make it so.

Proposed Response Response Status O

Cl 143 SC 143.2.4.4 P147 L2 # 261

D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei

Comment Type ER Comment Status X

use of red lines in Fig 143-3. See IEEE-SA Style Guideline - color should not be needed to interpret informatin, and line drawings should be saved as black/white
See also Fig 143-8, P 152

SuggestedRemedy

Save diagram in black /white

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 143 SC 143.2.5 P148 L2 # 496
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X post-deadline
 Figure 143-5 vertical axis label has characters overlapping.
 SuggestedRemedy
 Use smaller font to prevent characters from overlapping.
 Proposed Response Response Status O

Cl 143 SC 143.2.5 P148 L33 # 33
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "can achieve an instantaneous transmission rate of" to "may achieve an instantaneous transmission rate of"
 Proposed Response Response Status O

Cl 143 SC 143.2.5.2 P149 L25 # 34
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "Other timing variability can accumulate in the sublayers" to "Other timing variability may accumulate in the sublayers"
 Proposed Response Response Status O

Cl 143 SC 143.3.1 P153 L5 # 171
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 The M and N in "M instances of the PLS service interface (one per MAC) and N xMII instances" should be in italics.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.1 P153 L14 # 262
 D'Ambrosia, John Futurewei, U.S. Subsidiary of Huawei
 Comment Type ER Comment Status X
 Vertical text in left / right of diagram of Fig 143-9 is illegible
 SuggestedRemedy
 Use different font to fascilate being able to read text
 Proposed Response Response Status O

Cl 143 SC 143.3.1 P153 L26 # 497
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X post-deadline
 Index is incorrect.
 SuggestedRemedy
 Change: "TXC[N]<3:0>", To: "TXC[N-1]<3:0>"
 Proposed Response Response Status O

Cl 143 SC 143.3.1 P153 L26 # 172
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 We seem to have acquired an extra TCX in figure 143-9.
 SuggestedRemedy
 Change: "TXC[N]<3:0>" to "TXC[N-1]<3:0>"
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.3.1.1 P153 L41 # 51
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Compound adjective
 SuggestedRemedy
 Change "In all single channel RS definitions" to "In all single-channel RS definitions"
 Proposed Response Response Status O

Cl 143 SC 143.3.1.2.2 P155 L25 # 304
 Kramer, Glen Broadcom
 Comment Type T Comment Status X
 The MCRS_CTRL[ch].indication(cw_left) primitive does not take any arguments anymore. It has been corrected everywhere in text, but still remains in the subclause title.
 SuggestedRemedy
 strike "cw_left"
 Proposed Response Response Status O

Cl 143 SC 143.3.1.1 P154 L18 # 52
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Statement is not correct: "All transmit 25GMII interfaces share a common clock." - tabel also shows XGMII
 SuggestedRemedy
 Change "All transmit 25GMII interfaces share a common clock." to "All transmit xGMII interfaces share a common clock." under Table 143-1
 Proposed Response Response Status O

Cl 143 SC 143.3.1.2.2 P155 L26 # 174
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "ch" and "link_id", "env_length", "EnvPam", "epam" should be in italics.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.1.2.1 P155 L18 # 173
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 In "This opens an envelope on channel ch for the LLID specified by link_id with a length (in EQs) of env_length. If all channels are idle, the EnvPam variable (see 143.3.3.4) is set to the value of epam (see EnvStartHeader() function definition in 143.3.3.5)."
 "ch", "link_id", "env_length", "EnvPam", "epam" should be in italics.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.1.2.2 P155 L29 # 35
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "The MPCP can decide whether to issue a new envelope immediately" to "The MPCP may decide whether to issue a new envelope immediately"
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.3.2 P156 L3 # 175
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type **E** Comment Status **X**
 If we are treating field names as variables (as in Cl 144.3.6.x) then all field names in this section should be in italics.
 SuggestedRemedy
 per comment
 Proposed Response Response Status **O**

Cl 143 SC 143.3.2 P157 L5 # 105
 Anslow, Pete Ciena
 Comment Type **E** Comment Status **X**
 The IEEE Style Manual states that for a number range "Dashes should never be used because they can be misconstrued as subtraction signs."
 Several table in the draft violate this rule.
 SuggestedRemedy
 In table 143-3, change all instances of "x-y" to "x to y"
 Make equivalent change throughout the draft where a hyphen is used to indicate a range including:
 Table 144-2, Table 144-3, Table 144-4, Table 144-7, Table 144-8, Table 144-11, Table 144-12.
 142.4.4.2 page 139, line36 ("20-30")
 Proposed Response Response Status **O**

Cl 143 SC 143.3.2 P157 L5 # 263
 Kramer, Glen Broadcom
 Comment Type **TR** Comment Status **X**
 The draft has multiple issues with incorrect endianness of various constants. Per 802.3 conventions, all hexadecimal values are shown with LSB on the right. Thus, the control bits in the EQ representing an envelope header should be 0x01 (i.e., the first octet in an EQ is a control character, the rest are data). But the draft shows the control bits as 0x80 in multiple places.
 Also our definitions of IEI_EQ, IBI_EQ, RATE_ADJ_EQ, and PREAMBLE_EQ all show the control bits at the wrong end of the block.

SuggestedRemedy
 Apply multiple changes to the draft as shown in kramer_3ca_2_0719.pdf
 Proposed Response Response Status **O**

Cl 143 SC 143.3.2 P157 L25 # 272
 Kramer, Glen Broadcom
 Comment Type **T** Comment Status **X**
 It is not true to state that bits E and K are "used by 1904.1". 1904.1 was approved in 2013 and has no knowledge of 802.3ca.
 SuggestedRemedy
 There are (at least) three possible solutions:
 1) Table 143-3 provides no new information compared to the preceding Figure 143-10. In addition to everything that the table shows, the figure provides such details as the bit order for various fields and how the header is split across two 25GMII transfers. So, just delete the table.
 2) Change bits E and K to "reserved" and delete all references to IEEE1904.1
 3) If there is a strong desire to lock the bits E and K to 1904.1 (which is too presumptive at this time), then the footnote should say "Reserved for IEEE Std 1904.1". Only one footnote is needed for both bits. If we decide to go this route, in the description column, we should provide the full description of these bits instead of just E and K.
 The commenter prefers solution #1.
 Proposed Response Response Status **O**

Comments Received

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Cl 143 SC 143.3.2.1 P157 L43 # 53
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 The statement "The following test sequences show" is not clear, since associated tables are on the next page.
 SuggestedRemedy
 Change "The following test sequences show" to "The test sequences in Table 143-4, Table 143-5, and Table 143-6 show"
 Proposed Response Response Status O

Cl 143 SC 143.3.3.3 P161 L37 # 337
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 It would be a good idea to avoid hyphenating constant names and any simple math equation where it might have confusing interpretation between minus sign and a hyphen. Same for line 43.
 SuggestedRemedy
 Remove the line breaking.
 Proposed Response Response Status O

Cl 143 SC 143.3.3 P158 L1 # 273
 Marris, Arthur Cadence Design Systems
 Comment Type E Comment Status X
 Why is some text shaded in Table 143-4?
 SuggestedRemedy
 Remove shading of CRC8 and other shading if appropriate.
 Proposed Response Response Status O

Cl 143 SC 143.3.3.3 P161 L44 # 338
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 End of sentence for Description needs a period.
 SuggestedRemedy
 Add the period to the end of sentence.
 Proposed Response Response Status O

Cl 143 SC 143.3.3.2 P159 L42 # 176
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "are be added" should be "are to be added"
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.3.4 P161 L11 # 177
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "is also as the row index" should be "is also used as the row index"
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.3.5 P162 L20 # 367
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 Bit ordering in EnvContHeader and EnvStartHeader function definitions is reversed. In all other cases, we show ranges starting from higher value and ending with lower value. Here, for some reason, the ranges are reversed
 SuggestedRemedy
 Reverse the bit order, for example hdr<0:7> should become hdr<7:0>
 Proposed Response Response Status O

Cl 143 SC 143.3.3.5 P163 L28 # 360
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Format definition of EQ structure is missing. It is defined through a comment only
 SuggestedRemedy
 A formal definition will be needed, perhaps using C++ style for classes, showing fields defined and how they are defined?

```
struct EQ {
  bool Control[8];
  int8u Data [8];
}
```

 Proposed Response Response Status O

Cl 143 SC 143.3.3.5 P163 L32 # 366
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 "," versus ";"
 SuggestedRemedy
 change "for(octet_index = 0; octet_index < 8, octet_index++)" to "for(octet_index = 0; octet_index < 8>>>>;<<<< octet_index++)", change marked in >>>><<<<
 Proposed Response Response Status O

Cl 143 SC 143.3.3.5 P163 L32 # 178
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 GetMacOctet and IsIdle are not defined
 SuggestedRemedy
 Add in alpha order:
 GetMacOctet (link_id) a function that returns eight bits of data from the MAC associated with the passed <italic>link_id</italic>.
 IsIdle(byte) a Boolean function that returns True of all bits in the <italic>byte</italic> are idle.
 Proposed Response Response Status O

Cl 143 SC 143.3.3.5 P163 L33 # 359
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Function GetMacOctet() used but not formally specified anywhere.
 SuggestedRemedy
 Insert a formal definition of GetMacOctet() function as follows:

```
int8u GetMacOctet(link_id)
The GetMacOctet() function retrieves one octet (8 bits) of data from a MAC identified by the link_id parameter and returns it to the calling function.
```

 Proposed Response Response Status O

Cl 143 SC 143.3.3.5 P163 L33 # 311
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 GetMacOctet function is not defined.
 SuggestedRemedy
 Returns an 8-bit vector based on eight PLS_DATA.request primitives. Each bit may take one of four values: ONE, ZERO, DATA_COMPLETE, or IDLE. If the PLS_DATA.request primitive is not able to return a value of ONE, ZERO, or DATA_COMPLETE, a value of IDLE will be returned instead.
 Proposed Response Response Status O

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Cl 143 SC 143.3.3.5 P163 L34 # 312
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 Idle function is not defined.
 SuggestedRemedy
 A boolean function that returns TRUE if all eight bits of the presented octet have a value of IDLE. Otherwise, it returns FALSE.
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P165 L1 # 361
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Variable EnvPam used but not initialized in the state diagram or description.
 SuggestedRemedy
 Add initialization value to state INIT in Figure 132-12
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P165 L1 # 365
 Hajduczenia, Marek Charter Communications
 Comment Type TR Comment Status X
 In Figure 143-12, data starts being written into EnvTx from wRow of 1 (see INIT state where it is set to 0, and then NEXT_ROW where it is set immediately to 1 before any data is written into EnvTx), while Figure 143-13 starts reading data from rRow equal to 0. This means that at the start of the state diagram, state and content of EnvTx[ch][0] is not defined in any way.
 SuggestedRemedy
 Suggest to change initialization condition in Figure 143-13 to match initialization of EnvTx in Figure 143-12, i.e., change rRow < 0 to rRow < 1. Index wrap-around will do the rest and we can avoid the problem altogether.
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P165 L3 # 489
 Law, David Hewlett Packard Enterprise
 Comment Type ER Comment Status X
 Subclause 2.6.3 'Draft Standard Formatting Requirements' of the IEEE 802.3 Operations Manual states that 'The draft must be provided to the IEEE in Adobe® Framemaker. At a minimum this shall be completed prior to the Sponsor ballot however it is preferable that the draft be maintained in this format for its entire life.'. It appears, however, that at least some of the state diagrams are not in Frame and are instead imported pictures, for example 143-12 and 143-13.

SuggestedRemedy
 Ensure that Figures are converted to Framemaker prior to Sponsor ballot, the earlier the better to ensure that any errors created during the conversion are caught as soon as possible. If you need help in doing this please let me know.
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P165 L15 # 364
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Name of CHECK_ENV_SIZE state is rather ill-fitting - there is no envelope size checking done in this state, all it does it prepare filler pattern in case there is no data to send
 SuggestedRemedy
 Change name of CHECK_ENV_SIZE state to PREP_FILLER (for preparing filler EQ pattern)
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P165 L15 # 363
 Hajduczenia, Marek Charter Communications
 Comment Type T Comment Status X
 Name of CHECK_HEADER state is rather ill-fitting - there is no header check in this state, it is empty in fact
 SuggestedRemedy
 Change name of CHECK_HEADER state to FETCH_ENV (for fetching envelope if MCRS does send request in time)
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.3.3.6.2 P165 L15 # 362
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Figure 143-12 seems to be using "*" symbol designating "AND" logical operation. All other SDs have been modified to use the new set of definitions. This one was left behind
 SuggestedRemedy
 Change all instances of "*" to "AND" in Figure 143-12
 Proposed Response Response Status O

Cl 143 SC 143.3.4.3 P168 L43 # 179
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "RX_-
 CLK[ch]" should not cross the line.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P165 L36 # 339
 Laubach, Mark Broadcom
 Comment Type TR Comment Status X
 In Acrobat for my PDF, it looks like a hyphen at the end of "BlkLeft[wCol]-" rather than a minus 1 "- ", like in the end of "EnvLeft[wCol]- - " on line 30.
 SuggestedRemedy
 Confirm it should be a minus 1 "- " and make it visibly clear.
 Proposed Response Response Status O

Cl 143 SC 143.3.4.4 P169 L15 # 265
 Kramer, Glen Broadcom
 Comment Type TR Comment Status X
 When an envelope header is formed, the CRC8 is calculated over bits 8 through 63 of an EQ. But when the header is received, the IsHeader() function calculates its own CRC8 over bits 0 through 63. These CRC8 values will never match.
 SuggestedRemedy
 In Function IsHeader(...), replace the line
 "eq<64:71> == CRC8(eq<0:63>);" with the line
 "eq<71:64> == CRC8(eq<63:8>);"
 Proposed Response Response Status O

Cl 143 SC 143.3.3.6.2 P166 L9 # 264
 Kramer, Glen Broadcom
 Comment Type TR Comment Status X
 MCRS Transmit Process (Fig 143-13) and MCRS Receive Process (Fig 143-15) do not use proper bit locations, according to EQ format definition in Figure 143-2.
 SuggestedRemedy
 Change both state diagrams as shown in kramer_3ca_1_0719.pdf
 Proposed Response Response Status O

Cl 143 SC 143.3.4.4 P169 L28 # 266
 Kramer, Glen Broadcom
 Comment Type E Comment Status X
 Incorrect format for a hexadecimal numeric value
 SuggestedRemedy
 replace 0x0A0A0A0A with 0x0A-0A-0A-0A
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.3.4.4 P169 L36 # 180
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Make code for OutputToMac(int16 link_id, EQ eq) more condensed and readable by putting comments on same line as instruction, combining comments "// Rx other ctrl. character { // including /T/ (value 0xFD)" etc.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.3.4.5.1 P171 L21 # 181
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Variable wRow as defined in 143.3.4.3 is a six bit variable but in Fig 143-15 PARSE_HEADER state it is been assigned a 5 bit value. These two sizes should agree.
 SuggestedRemedy
 Change RxEQ<4:0> to RxEQ<5:0>
 Proposed Response Response Status O

Cl 143 SC 143.3.4.5.2 P172 L21 # 182
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Need to latch localtime on ESH.
 SuggestedRemedy
 Between PROCESS_HEADER and UPDATE_ENV_SIZE add the following:
 New state: "CHECK_FOR MPCPDU"
 Action: none
 Exit 1 to UPDATE_ENV_SIZE: else
 Exit 2 to 2nd new state: LinkID[rCo] (is a member of) {TS_LLID}
 2nd new state: "CAPTURE_TIMESTAMP"
 Action: TS(Plid) <= LocalTime
 Exit to UPDATE_ENV_SIZE: UCT
 Define new variables:
 TS_LLID
 Type: list of PLIDs
 Description: A list of all active PLIDs.
 LocalTime
 Type: 32-bit unsigned
 See 144.2.1.2
 Proposed Response Response Status O

Cl 143 SC 143.4.1 P174 L8 # 183
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 We have generally agreed to use xMII where appropriate. Also the 25GMII supports 10 Gb/s operation only in a very obtuse manor.
 SuggestedRemedy
 Change
 "The MCRS in Nx25G-EPON architecture serves as an interfaces sublayer between the MAC sublayer and 25GMII. The 25GMII interfaces have the following characteristics:" to
 "The MCRS in Nx25G-EPON architecture serves as an interface sublayer between the MAC and xMII. The xMII interfaces have the following characteristics:"
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.4.1.1 P174 L17 # 184
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 There is no need for an abbreviation which is never used (to say nothing of confusing if used)
 SuggestedRemedy
 Strike "(DC)" and "(UC)"
 Proposed Response Response Status O

Cl 143 SC 143.4.1.2 P175 L4 # 185
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 I don't believe there is a suitable reference to support this statement: "Additional details for MCRS implementations supporting the channel rate asymmetry are provided in 143.4.4."
 SuggestedRemedy
 Strike the statement
 Proposed Response Response Status O

Cl 143 SC 143.4.1.1 P174 L30 # 404
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Nx25GEPON
 SuggestedRemedy
 Nx25G-EPON
 Proposed Response Response Status O

Cl 143 SC 143.4.1.2 P175 L5 # 54
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Reference in red
 SuggestedRemedy
 Strike statement "Additional details for MCRS implementations supporting the channel rate asymmetry are provided in 143.4.4"
 Proposed Response Response Status O

Cl 143 SC 143.4.1.1 P174 L42 # 389
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Unnecessary line break
 SuggestedRemedy
 Also at line 45
 Proposed Response Response Status O

Cl 143 SC 143.4.1.2 P175 L5 # 313
 Lynskey, Eric Broadcom
 Comment Type E Comment Status X
 Subclause 143.4.4 does not exist.
 SuggestedRemedy
 Remove the sentence.
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.4.1.2 P175 L5 # 388
 Dawe, Piers Mellanox
 Comment Type E Comment Status X
 Apparent cross-reference in red "143.4.4" doesn't work.
 SuggestedRemedy
 Proposed Response Response Status O

Cl 143 SC 143.4.1.2 P175 L5 # 340
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 "143.4.4" should be a proper crossref and not just RED in color.
 SuggestedRemedy
 Make it a proper cross ref.
 Proposed Response Response Status O

Cl 143 SC 143.4.1.2 P175 L10 # 36
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "the channel number asymmetry mechanisms can be combined" to "the channel number asymmetry mechanisms may be combined"
 Proposed Response Response Status O

Cl 143 SC 143.4.1.3.2 P175 L39 # 37
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "buffer can be reduced to only two rows" to "buffer may be reduced to only two rows"
 Proposed Response Response Status O

Cl 143 SC 143.4.2 P176 L2 # 186
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Missing "The"
 SuggestedRemedy
 Add before: "ONU MCRS always sets the write pointer ..."
 and at line 14 before "PCS receiver synchronizes on start-of-burst delimiter ..."
 and at line 17 before "xMII and is received into ..."
 and at line 17 before "OLT MCRS EnvRx buffer."
 Proposed Response Response Status O

Cl 143 SC 143.4.2 P176 L28 # 187
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 What is a DSC_PLID?
 SuggestedRemedy
 Change to DISC_PLID
 Proposed Response Response Status O

Comments Received

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Cl 143 SC 143.4.3 P176 L45 # 188
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 I believe MPCP has already been introduced in this clause
 SuggestedRemedy
 Change:
 "Multi-Point Control Protocol (MPCP)" to
 "MPCP"
 Proposed Response Response Status O

Cl 144 SC 144 P244 L6 # 254
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 MP9b should ref 144.3.7.7 not 144.3.8.7.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 143 SC 143.5.4.2 P179 L6 # 106
 Anslow, Pete Ciena
 Comment Type T Comment Status X
 The rules for entries in the "Status" column of PICS table are defined in 21.6.2 of the base standard. This does not include "+" as an "or" function.
 SuggestedRemedy
 Change "+" to "or" as per previous amendments
 Proposed Response Response Status O

Cl 144 SC 144.1 P180 L12 # 189
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 We report queue occupancy levels not congestion.
 SuggestedRemedy
 Change:
 "reporting of congestion" to:
 "reporting queue occupancy"
 Proposed Response Response Status O

Cl 144 SC 144 P180 L1 # 464
 Thompson, Geoff GraCaSI S.A./Independent
 Comment Type TR Comment Status X
 This clause is out of scope. It is shown in Fig. 144-2 as residing in the MAC sub-layer. This is a Physical Layer project which said it would "extend the operation of EPON protocols". That means to me the augmentation of what is specified in clause 64, not the creation of an entire new specification misplaced in the Physical Layer.
 SuggestedRemedy
 Rewrite the draft to fit what was promised in the PAR. Presumably that will include deleting lause 144.
 Proposed Response Response Status O

Cl 144 SC 144.1 P180 L20 # 190
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Missing "the", "a", or "an"
 SuggestedRemedy
 At the following locations (pg/line) change "" to read "":
 180/20 "TDM-based access to P2MP medium" -> "TDM-based access to _the_ P2MP medium"
 181/27 "binding each instance of MAC" -> "binding each instance of _a_ MAC"
 183/3 "upstream transmissions in EPON" -> "upstream transmissions in _an_ EPON"
 186/5 "envelope transmission over multi-channel P2MP media" -> "envelope transmission over _a_ multi-channel P2MP media"
 187/1 "For accuracy of receive clock" -> "For accuracy of _the_ receive clock"
 187/11 "MPCPDU is received from MAC" -> "MPCPDU is received from _the_ MAC"
 189/35 "To achieve this goal, MPCP includes processes that measure range" -> "To achieve this goal, _the_ MPCP includes processes that measure _the_ range" (2x)
 190/11 "transmits DISCOVERY MPCPDU with timestamp value" -> "transmits a DISCOVERY MPCPDU with a timestamp value" (2x)
 193/12 "of GATE Generation Process and a separate instance of Registration Completion Process" -> "of _the_ GATE Generation Process and a separate instance of _the_ Registration Completion Process"
 195/26 "may only contain PLID, MLID, or ULID, but never GLID" -> "may only contain _a_ PLID, MLID, or ULID, but never _a_ GLID"
 208/49 "registered ONUs using unicast" -> "registered ONUs using a unicast"
 214/43 "transmitting at line rate" -> "transmitting at a line rate"
 214/48 "transmitting at line rate" -> "transmitting at a line rate"
 222/5 "timer counts down time" -> "timer counts down the time"
 227/18 "ONU is capable of receiving DISCOVERY MPCPDU" -> "ONU is capable of receiving a DISCOVERY MPCPDU"
 227/19 "transmitted by the OLT on DISC_PLID" -> "transmitted by the OLT on the DISC_PLID"
 227/27 "ONU skips such discovery attempt" -> "ONU skips such discovery attempts" (add an "s" to attempt)
 Proposed Response Response Status O

Cl 144 SC 144.1 P180 L21 # 341
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Bullets have inconsistent endings, one ends in a period, the other doesn't.
 SuggestedRemedy
 Editor to choose how to have consistent (or appropriate) line endings
 Proposed Response Response Status O

Cl 144 SC 144.1.1.1 P180 L45 # 191
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Hopefully we allocate more than one grant to each ONU
 SuggestedRemedy
 Change
 "allocating a transmission window (grant)" to
 "allocating transmission windows (grants)"
 Proposed Response Response Status O

Cl 144 SC 144.1.1.2 P181 L24 # 192
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 This is the only instance of "MAC element"
 SuggestedRemedy
 Change to "MAC instances"
 Proposed Response Response Status O

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Cl 144 SC 144.1.1.2 P181 L40 # 193
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 This para implies free use of pre-defined single-copy broadcast for a number of purposes which is incorrect.
 SuggestedRemedy
 Change:
 "Several single-copy broadcast logical links are pre-set. Such links may be used to broadcast MPCPDUs, CCPDUs, or OAMPDUs." to:
 "Several single-copy broadcast logical links are pre-defined for specific purposes (see Table 144-1)."
 Proposed Response Response Status O

Cl 144 SC 144.1.1.2 P181 L49 # 194
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 This statement is extraneous and misleading imho. Most LLID values are not setup by the Discovery Process and those that are not very "dynamic" but rather static.
 SuggestedRemedy
 Strike "Some LLID values are pre-set, while other values are dynamically assigned by the Discovery Process (144.3.5)."
 If the TF believe it is necessary to mention the Discovery Process in this section then change "By default, the OLT is connected" to "By default during the Discovery Process (144.3.5), the OLT is connected"
 Proposed Response Response Status O

Cl 144 SC 144.1.1.3 P183 L4 # 38
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "newly connected ONU can be scheduled for the upstream transmission" to "newly connected ONU may be scheduled for the upstream transmission"
 Proposed Response Response Status O

Cl 144 SC 144.1.1.3 P183 L8 # 195
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "registration requests" should be singular
 "details" at line 13 too.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.1.3 P183 L26 # 2
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Empty lines
 Similar issue in 144.1.4
 SuggestedRemedy
 Remove the empty lines
 Proposed Response Response Status O

Cl 144 SC 144.1.4.2 P184 L10 # 314
 Lynskey, Eric Broadcom
 Comment Type E Comment Status X
 Multiplexor
 SuggestedRemedy
 Multiplexer is used more frequently. Suggest that all instances of multiplexor be changed. Page 184 lines 42 and 45. Page 186 line 33. Page 187 line 19 and 30.
 Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.1.4.2 P184 L45 # 196
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 "MCI:MA_-
 CONTROL.indication" crosses the line
 SuggestedRemedy
 make non-breaking
 Proposed Response Response Status O

Cl 144 SC 144.1.4.4 P186 L4 # 4
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 MCRS primitibe defined before
 SuggestedRemedy
 Change "sublayer (MCRS, see Clause 143)." to "sublayer (see Clause 143)."
 Proposed Response Response Status O

Cl 144 SC 144.1.4.2 P184 L45 # 3
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Name of primitive is broken across lines
 SuggestedRemedy
 Make sure primitive names do not break across lines.
 Proposed Response Response Status O

Cl 144 SC 144.2.1 P186 L27 # 198
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Use of the term timestamp is ambiguous:
 187/28 - defined as a variable
 187/30 - something other than (LocalTime?) the variable that is being defined
 187/33 - the variable that is being defined
 187/52 - a non italicized variable
 187/53 - "timestamp value" (which apparently is not the same as the variable)
 188/2 - a field name "Timestamp field"
 191/40 - the value of the variable (or maybe field?) "the Timestamp value pre-compensated"
 192/24 - a field value "the Timestamp field value"
 I could go on;
 there are 29 instances of "Timestamp" most of which (but not all) are in italics (including a lone instance of "Timestamp drift" in DeregistrationTrigger definition),
 there are 29 instances of "timestamp" none of which are in italics (including 11 instance of "timestamp value" and 11 instances of "timestamp drift")
 We can be nicer to the first time reader.
 SuggestedRemedy
 See remain_3ca_2_0719.pdf which shows all changes in marked text (remain_3ca_3_0719 omits change markings).
 Proposed Response Response Status O

Cl 144 SC 144.1.4.4 P186 L3 # 197
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 MCRS already introduced on pg 181
 SuggestedRemedy
 Change:
 "Multi-Channel Reconciliation sublayer (MCRS, see Clause 143)" to
 "MCRS (see Clause 143)"
 Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.2.1 P186 L27 # 5 [REDACTED]
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 We usually use the term "forward" to describe the action of delivering frames somewhere else
 SuggestedRemedy
 Change "passing these frames" to "forwarding these frames"
 Proposed Response Response Status O

Cl 144 SC 144.2.1.2 P187 L1 # 480 [REDACTED]
 Slavick, Jeff Broadcom
 Comment Type TR Comment Status X
 TBD present for LocalTime reference.
 SuggestedRemedy
 Replace TBD with pointer to appropriate refernce clause
 Proposed Response Response Status O

Cl 144 SC 144.2.1.2 P186 L53 # 199 [REDACTED]
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 We should be more specific about which TX & Rx clocks are being referred to here.
 SuggestedRemedy
 Change
 "At the OLT the counter shall track the transmit clock, while at the ONU the counter shall track the receive clock." to
 "At the OLT the counter shall track the xMII transmit clock, while at the ONU the counter shall track the xMII receive clock."
 Proposed Response Response Status O

Cl 144 SC 144.2.1.2 P187 L1 # 200 [REDACTED]
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Either this statement is incorrect or the Control Parser Process is incorrect. "In the ONU, this variable is updated with the received timestamp value by the Control Parser Process (see 144.2.1.5)". Note that the ProcessTimestamp only sets the ONUs LocalTime once.
 SuggestedRemedy
 Copy the "// The following line is executed only in the ONU LocalTime = Timestamp;" lines to the end of the else statement in ProcessTimestamp definition (pg 188 line 17).
 Proposed Response Response Status O

Cl 144 SC 144.2.1.2 P187 L1 # 269 [REDACTED]
 Kramer, Glen Broadcom
 Comment Type T Comment Status X
 TBD and missing reference
 SuggestedRemedy
 replace with a cross-reference to 142.4.3.1
 Proposed Response Response Status O

Cl 144 SC 144.2.1.2 P187 L1 # 278 [REDACTED]
 Marris, Arthur Cadence Design Systems
 Comment Type TR Comment Status X
 {TBD reference to Clause 142 needed}
 SuggestedRemedy
 Add appropriate reference
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.2.1.2 P187 L1 # 6
 Hajduczenia, Marek Charter Communications
 Comment Type **TR** Comment Status **X**
 Missing reference to Clause 142
 SuggestedRemedy
 I do not see any statement which could be referenced to. Strike the whole sentence?
 Proposed Response Response Status **O**

Cl 144 SC 144.2.1.2 P189 L1 # 298
 Wienckowski, Natalie General Motors
 Comment Type **TR** Comment Status **X**
 There is a red highlighted TBD in the document.
 SuggestedRemedy
 Change: {TBD reference to Clause 142 needed}
 To: Appropriate subclause in Clause 142.
 Proposed Response Response Status **O**

Cl 144 SC 144.2.1.2 P187 L1 # 342
 Laubach, Mark Broadcom
 Comment Type **E** Comment Status **X**
 Resolve the red TBD text to cross reference to the appropriate Clause 142 subclause.
 SuggestedRemedy
 Make it so.
 Proposed Response Response Status **O**

Cl 144 SC 144.2.1.3 P187 L1 # 444
 Powell, William Nokia
 Comment Type **TR** Comment Status **X**
 Current text:
 "For accuracy of receive clock, see {TBD reference to Clause 142 needed}."
 SuggestedRemedy
 Change to read:
 For accuracy of receive clock, see 142.4.3.1.
 Proposed Response Response Status **O**

Cl 144 SC 144.2.1.2 P187 L1 # 390
 Dawe, Piers Mellanox
 Comment Type **E** Comment Status **X**
 Missing cross-reference
 SuggestedRemedy
 Proposed Response Response Status **O**

Cl 144 SC 144.2.1.3 P187 L9 # 201
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type **E** Comment Status **X**
 What is a PLID? The mnemonic has not yet been introduced.
 SuggestedRemedy
 Change "PLID" to "Physical Layer ID (PLID)"
 On pg 194 line 45 change "Physical Layer ID (PLID)" to "PLID"
 Proposed Response Response Status **O**

Cl 144 SC 144.2.1.2 P187 L1 # 107
 Anslow, Pete Ciena
 Comment Type **TR** Comment Status **X**
 "{TBD reference to Clause 142 needed}" is not acceptable content for a draft that is suitable to move to Standards Association ballot.
 SuggestedRemedy
 replace "{TBD reference to Clause 142 needed}" with a suitable reference.
 Proposed Response Response Status **O**

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.2.1.3 P187 L35 # 202
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 The reference to T able 31A-1 should not be forest green but rather a live link here and at line 40.
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.3.1.1 P191 L33 # 343
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 For consistency, statements 1) and 2) need periods at the end of the sentence.
 SuggestedRemedy
 Make it so.
 Proposed Response Response Status O

Cl 144 SC 144.2.1.5 P188 L48 # 315
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 In Figure 144-5, it shows that the first argument passed to MCII is the DA. In 144.1.4.2, it shows the first parameter as being the opcode.
 SuggestedRemedy
 Remove DA from the argument list.
 Proposed Response Response Status O

Cl 144 SC 144.3.1.1 P192 L29 # 39
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "This condition can be independently detected" to "This condition may be independently detected"
 Proposed Response Response Status O

Cl 144 SC 144.3.1 P189 L34 # 203
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "To main purpose of the MPCP" or not "To main purpose of the MPCP" Either way "To" is wrong.
 SuggestedRemedy
 Change:
 "To main purpose of the MPCP" to
 "The main purpose of the MPCP"
 Proposed Response Response Status O

Cl 144 SC 144.3.1.1 P192 L34 # 204
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 MLID has not been introduced.
 SuggestedRemedy
 Change "MLID" to "Management Link ID (MLID)"
 On pg 195 line 3 change "Management Link ID (MLID) carries" to "The MLID carries"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.1.1 P192 L37 # 205
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 This requirement is redundant as a properly implemented ProcessTimestamp function ensures that this first large timestamp difference is accommodated.
 SuggestedRemedy
 Change:
 "This large difference is detected immediately after the registration is expected and the ONU shall not recognize it as a timestamp drift error." to
 "This large difference that is detected immediately after registration is expected and the ONU does not recognize it as a timestamp drift error (see ProcessTimestamp 144.2.1.4)."
 Proposed Response Response Status O

Cl 144 SC 144.3.1.2 P192 L44 # 206
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 This is the only instance of the word allowances in the draft. We should not indiscriminately use different terms for the same thing.
 SuggestedRemedy
 change to allocations
 Proposed Response Response Status O

Cl 144 SC 144.3.2 P193 L5 # 344
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Only one of the five hyphenated (bulleted) have an ending period. Same for list beginning on page 193, line 52.
 SuggestedRemedy
 Editor to choose how to have consistent (or appropriate) line endings
 Proposed Response Response Status O

Cl 144 SC 144.3.2 P193 L12 # 207
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "as separate instance" should be "a separate instance"
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.3.4.1 P194 L46 # 208
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Are these "TDM-based medium access by the ONUs" something other than GATES?
 There is no need to introduce new terms here.
 SuggestedRemedy
 Change:
 "such as TDM-based medium access by the ONUs" to
 "such as GATE messages"
 Proposed Response Response Status O

Cl 144 SC 144.3.5 P195 L44 # 209
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 There are duplicate requirements between Table 144-1 and the text of Section 144.3.5. For example registered ONUs accepting BCAST_PLID is specified in Table 144-1 3rd row and on pg 196 line 17.
 SuggestedRemedy
 on pg 196 line 12 change:
 "a registered ONU shall accept all envelopes" to
 "a registered ONU accepts all envelopes"
 Change Table 144-1 as shown in remain_3ca_1_0719.pdf
 Update PICS accordingly.
 Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.3.5 P196 L14 # 345
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 First list item ends in a ";", the other items have no ending punctuation.
 SuggestedRemedy
 Editor to choose how to have consistent (or appropriate) line endings
 Proposed Response Response Status O

Cl 144 SC 144.3.6.1 P197 L1 # 346
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Move the page break from before this line to after this paragraph. The preceding page looks like it is missing information at the bottom of the page.
 SuggestedRemedy
 Editor to choose.
 Proposed Response Response Status O

Cl 144 SC 144.3.6 P196 L27 # 210
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 There are several disagreements between the text and Figure 144-11.
 The same issues exists on pg 232 / Fig 144-30. and in Cl 144.4.3 pg 232 / Fig 144-30
 SuggestedRemedy

In text	In Figure
DestinationAddress	Destination Address
SourceAddress	Source Address
OperandList	Operand List

 Change Figures to agree with the text (assuming these are considered variables, otherwise it might be easier to change the text)
 Proposed Response Response Status O

Cl 144 SC 144.3.6.1 P197 L28 # 41
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "Up to seven envelope allocations can be carried" to "Up to seven envelope allocations may be carried"
 Proposed Response Response Status O

Cl 144 SC 144.3.6 P196 L35 # 40
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "For MPCPDUs originating at the OLT, this can be the address of" to "For MPCPDUs originating at the OLT, this may be the address of"
 Proposed Response Response Status O

Cl 144 SC 144.3.6.1 P197 L48 # 211
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 We seem to have lost the definition of StartTime.
 SuggestedRemedy
 Add after ChannelMap description
 "— StartTime:
 This 32-bit unsigned integer value represents the start time of the transmission window (burst), expressed in the units of EQT. The start time is compared to the <|>LocalTime</|>, to correlate the start of the grant."
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.6.1 P198 L20 # 212
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Here we use the phrase "The value of 0 in this field signifies an empty ..." on pg 200 line 10 we use "The value of zero in this field signifies an empty ..." meanwhile we have a good constant defined for this - ESC_PLID.
 SuggestedRemedy
 Change both locations to "When this field is set to the value of ESC_PLID then it signifies an empty ..."
 Proposed Response Response Status O

Cl 144 SC 144.3.6.2 P199 L40 # 42
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "Up to seven LLIDs can be reported by a single" to "Up to seven LLIDs may be reported by a single"
 Proposed Response Response Status O

Cl 144 SC 144.3.6.2 P199 L47 # 213
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 The description for the timestamp field is repeated 7x. We don't do this for other variable definitions
 197/36
 199/47
 201/13
 203/4
 204/41
 206/4
 209/1

Similar situation exist for other fields.
 SuggestedRemedy
 Remove the description for all but the first instance of this field (pg 197 line 36). Note that the first instance of this is generic and does not mention OLT or ONU (which is good). Add a cross reference to the first definition instance "See 144.3.6.1" (with a live link of course).
 Do the same for the following field def's (pg/line fieldname xRef):
 200/9 LLID "See 144.3.6.1"
 206/9 ChannelMap "See 144.3.6.1"
 207/38 SP1Length "See 144.3.6.4"
 207/42 SP2Length "See 144.3.6.4"
 207/46 SP3Length "See 144.3.6.4"
 Proposed Response Response Status O

Cl 144 SC 144.3.6.2 P200 L2 # 214
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 We should make it clear that GLIDs are not included in the NonEmptyQueues count.
 SuggestedRemedy
 After "The number of LLIDs" add " (PLID, MLID, and ULIDs)"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.6.3 P201 L6 # 215
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 The variable name Timestamp should not cross the line
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.3.6.3 P201 L22 # 347
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 In tables in this subclause, there should be some consistency on whether to use a period at the end of an item in the Comment column. For example, in some cases "Ignored on reception" has an ending period, in other tables, it does not. Suggest being consistent across this subclause for those table Comments that read like a statement.
 SuggestedRemedy
 Editor to choose how to have consistent (or appropriate) line endings
 Proposed Response Response Status O

Cl 144 SC 144.3.6.3 P201 L31 # 216
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 PendingEnvelopes is an 8-bit value in the text but a 16 bit field in Fig 144-14 whereas EchoPendingEnvelopes is only 8-bits in both text and fig 144-15 (pg 203/204), At the very lease these should agree.
 Should we consider increasing the maximum size of PendingEnvelopes? This seemed like a reasonable size 10 years ago for pending grants but maybe not now.
 SuggestedRemedy
 Increase the size of these to a 10 bits. (4 x larger)
 Likewise increase size of EchoPendingEnvelopes on pg 203 line 33 and in Figure 144-15 (adjust Pad to 27 also).
 Proposed Response Response Status O

Cl 144 SC 144.3.6.3 P202 L22 # 458
 Nicholl, Shawn Xilinx
 Comment Type E Comment Status X
 In "Figure 144-14 - REGISTER_REQ MPCPDU" unexpected use of hyphen. Contrast with "Figure 103-26 - REGISTER_REQ MPCPDU" in existing 802.3-2018 which shows "Length/Type = 0x8808" and "Opcode = 0x0004". There are other figures in the document with unexpected hyphen (eg. Figure 144-30, 144-31, 144-32).
 SuggestedRemedy
 Remove the hyphen from the figures.
 Proposed Response Response Status O

Cl 144 SC 144.3.6.4 P202 L49 # 217
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Is "destination address" the same as "Destination Address" and "DestinationAddress"?
 SuggestedRemedy
 replace with "DestinationAddress"
 Proposed Response Response Status O

Cl 144 SC 144.3.6.4 P203 L11 # 218
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 PLID has already been introduced.
 SuggestedRemedy
 Change
 "physical layer identifier (PLID, see 144.3.4.1)" to
 "PLID (see 144.3.4.1)"
 Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.3.6.4 P203 L14 # 219
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 MLID has already been introduced.
 SuggestedRemedy
 Change:
 "management link identifier (MLID, see 144.3.4.2)" to
 "MLID, (see 144.3.4.2)"
 Proposed Response Response Status O

Cl 144 SC 144.3.6.5 P204 L39 # 108
 Anslow, Pete Ciena
 Comment Type E Comment Status X
 "Figure 144-14" should be a cross-reference.
 Likewise for "Figure 144-16" on page 208, line 52
 SuggestedRemedy
 Change "Figure 144-14" and "Figure 144-16" on page 208, line 52 to be cross-references.
 Proposed Response Response Status O

Cl 144 SC 144.3.6.6 P206 L17 # 220
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Elsewhere (ex. when assigning timestamp) we use LocalTime not local clock. It would be
 better if we were consistent.
 SuggestedRemedy
 Change "the local clock" to "LocalTime" (in italics)
 Proposed Response Response Status O

Cl 144 SC 144.3.6.6 P206 L40 # 43
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 In table 144-7, change all instance of "OLT cannot receive" to "OLT is not capable of
 receiving" and "OLT can receive" to "OLT is capable of receiving"
 Proposed Response Response Status O

Cl 144 SC 144.3.6.6 P207 L19 # 221
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Improper left margin. Reset para style to T,text
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.3.6.6 P207 L20 # 325
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 The draft makes it very clear how the ONU should react when an OLT advertises multiple
 speeds during a discovery attempt. There is no description of how the ONU should handle
 a case when multiple coexistence types are advertised. It can be left to the ONU to decide.
 SuggestedRemedy
 Remove the second two sentences of the paragraph and replace with: The OLT MPMC
 client may allow a concurrent registration of ONUs with different rates by setting both bits 5
 and 6 to 1. The processing of DiscoveryInfo flags by the ONU and the ONU behavior in
 dual-rate systems is further specified in 144.3.9. The OLT MPMC client may also allow a
 concurrent registration of ONUs with different coexistence options by setting both bits 14
 and 15 to 1. For ONUs that support both coexistence types, the choice of which type to
 attempt to register is implementation dependent.
 Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.3.6.7 P208 L42 # 222

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status X

This statement is misleading "Generally, the SYNC_PATTERN MPCPDUs are transmitted in envelopes with the LLID equal to DISC_PLID (see 144.3.5)." as it may not be the general case but does describe a required case for unregistered ONUs. Subsequent statement in this section contradicts the "Generally" phrasing.

SuggestedRemedy

Change the statement as follows:
 "The SYNC_PATTERN MPCPDUs are transmitted in envelopes with the LLID equal to DISC_PLID (see 144.3.5) to allow unregistered ONUs to obtain the synchronization pattern."

Proposed Response Response Status O

Cl 144 SC 144.3.6.7 P208 L52 # 348

Laubach, Mark Broadcom

Comment Type E Comment Status X

"Figure 144-16" needs to be a proper cross reference.

SuggestedRemedy

Make it so.

Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L34 # 299

Wienckowski, Natalie General Motors

Comment Type E Comment Status X

There is a reference to a place in this document that is red text and does not have a hyperlink.

SuggestedRemedy

Change 141.1.3 to a Cross-Reference.

Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L34 # 7

Hajduczenia, Marek Charter Communications

Comment Type E Comment Status X

Reference in red?

SuggestedRemedy

Change to 142.1.3 and make it live

Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L34 # 223

Remein, Duane Futurewei Technologies, Inc.

Comment Type E Comment Status X

Why is this a ref to 143.1.3 and in red font?

SuggestedRemedy

make this a live link to 142.1.3

Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L34 # 349

Laubach, Mark Broadcom

Comment Type E Comment Status X

Turn "143.1.3" into a proper cross reference or remove the Red text.

SuggestedRemedy

Make it so.

Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L34 # 274

Marris, Arthur Cadence Design Systems

Comment Type E Comment Status X

Fix cross reference (see 143.1.3)

SuggestedRemedy

Fix cross reference (see 143.1.3)

Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.3.7 P210 L38 # 224
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 We should be clear that the Discovery process is aborted only if a SYNC_PATTERN is receive for the DISC_PLID.
 SuggestedRemedy
 Change:
 "If a SYNC_PATTERN MPCPDU is received ..." to
 "If a SYNC_PATTERN MPCPDU directed to the DISC_PLID is received ..."
 Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L46 # 8
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Compound adjective "16 bit wide"
 SuggestedRemedy
 Change to "16-bit wide"
 Proposed Response Response Status O

Cl 144 SC 144.3.7 P210 L50 # 225
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 This is the only instance of the term off-line. It is easier on the reader if we are consistent in our use of terms. Unregistered is used at least 22 times, newly connected is use 3x.
 SuggestedRemedy
 Replace with "Off-line" and "newly connected" with "unregistered". Note that on pg 210 line 26 just strike "newly connected or".
 Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L1 # 303
 Kramer, Glen Broadcom
 Comment Type T Comment Status X
 "Each ONU waits a random amount of time before transmitting the REGISTER_REQ MPCPDU that is shorter than the length of the discovery window."
 A very confusing sentence. What is shorter then the discovery window, the REGISTER_REQ MPCPDU or the random amount of time?
 SuggestedRemedy
 Split this into two sentences:
 "Each ONU waits a random amount of time before transmitting the REGISTER_REQ MPCPDU. The wait time together with the REGISTER_REQ MPCPDU transmission time (including optical overhead, burst synchronization sequence, and FEC paity data) do not exceed the length of the discovery window."
 Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L3 # 9
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Can versus may
 SuggestedRemedy
 Change "REGISTER_REQ MPCPDUs can be received by the OLT" to "REGISTER_REQ MPCPDUs may be received by the OLT"
 Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L3 # 44
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "valid REGISTER_REQ MPCPDUs can be received" to "valid REGISTER_REQ MPCPDUs may be received"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7 P211 L9 # 226

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status X

It is not clear to me why we expect the ONU to lie to the OLT as implied by this statement "Note that even though a compliant ONU is not prohibited from supporting more than one data rate in any transmission channel, it is expected that a single supported data rate for upstream and downstream channel is indicated in the RegisterRequestInfo field." While I agree that an ONU should only attempt to register at a single rate it should advertise it's capabilities truthfully. The description of the information in the RegisterRequestInfo seems to begin with "Included in the REGISTER_REQ MPCPDU is the ONU's MAC address and ..." at line 3, which would make a better para break than this misguided note.

SuggestedRemedy

Start a new para beginning at line 3 "Included in the REGISTER_REQ MPCPDU is the ONU's MAC address and ..." and combine with the para starting "Note even thought ..."

Change:

"Note that even though a compliant ONU is not prohibited from supporting more than one data rate in any transmission channel, it is expected that a single supported data rate for upstream and downstream channel is indicated in the RegisterRequestInfo field." to "Note that even though a compliant ONU is not prohibited from supporting more than one data rate in any transmission channel, it is expected that an ONU only attempt to register at a single rate as indicated in the RegisterRequestInfo field bits 5 and 6."

Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L13 # 10

Hajduczenia, Marek Charter Communications

Comment Type E Comment Status X

Wrong field names

SuggestedRemedy

Change "the Laser On Time and Laser Off Time fields." to "the <i>LaserOnTime</i> and <i>LaserOffTime</i> fields." - make sure names are italicized

Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L26 # 45

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status X

"can" used and not intended per Style Guide

SuggestedRemedy

Change "the ONU is registered and normal message traffic can begin" to "the ONU is registered and normal message traffic may begin"

Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L32 # 46

Hajduczenia, Marek Charter Communications

Comment Type ER Comment Status X

"can" used and not intended per Style Guide

SuggestedRemedy

Change "The ONU can then reregister" to "The ONU may then reregister"

Proposed Response Response Status O

Cl 144 SC 144.3.7 P211 L33 # 324

Lynskey, Eric Broadcom

Comment Type T Comment Status X

Reregister and Deregister are not valid flags.

SuggestedRemedy

Change to, "...REGISTER_MPCPDU may indicate a value, NACK, that if specified forces the receiving ONU into reregistering." In the next sentence, change to "...REGISTER_REQ MPCPDU contains the NACK bit..."

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7.1 P213 L14 # 351
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 The "u" in "us" is not a symbol.
 SuggestedRemedy
 Should be the proper mu symbol.
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P213 L38 # 227
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 The description of ChState does not sound like an integer.
 SuggestedRemedy
 Change type to "8-bit Boolean array"
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P213 L51 # 11
 Hajduczenia, Marek Charter Communications
 Comment Type TR Comment Status X
 Undefined variables / constants? MissedReportCount, MISSED_REPORT_LIMIT
 SuggestedRemedy
 Need to be added and defined
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P214 L4 # 317
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 There is no way for the ONU to send a register ack once it has been registered. Figure 144-22 shows that the ONU can only send a register request once it has reached the REGISTERED state. Once the REGISTERED state in Figure 144-21 has been reached, only the other conditions (1, 2, 4) are expected.
 SuggestedRemedy
 Replace MsgRegisterAck with MsgRegisterReq in two places. Also replace Deregister with NACK.
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P214 L7 # 323
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 Deregister is not a valid flag.
 SuggestedRemedy
 Change to NACK.
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P214 L9 # 228
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 The description of GrantEndTime does sound like an integer.
 SuggestedRemedy
 Change type to "32-bit unsigned integer"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7.3 P214 L36 # 229
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 The description of MaxDelay does sound like an integer.
 SuggestedRemedy
 Change type to "32-bit unsigned integer"
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P214 L37 # 47
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "the maximum delay the ONU can apply to" to "the maximum delay the ONU may apply to"
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P214 L44 # 391
 Dawe, Piers Mellanox
 Comment Type T Comment Status X
 10.3125 Gb/s
 SuggestedRemedy
 10.3125 GBd. Also 25.78125 Gb/s -> GBd
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P214 L49 # 300
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Missing non-breaking spaces in number that have 4 or more digits to the right of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual.
 SuggestedRemedy
 Change: 25.78125
 To: 25.781 25
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P215 L1 # 48
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "this variable can take the following values" to "this variable takes the following values"
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P215 L21 # 230
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 This definition of RegAllowed disallows an ONU capable of both 10 & 25 G rates from registering with an OLT that is also capable of both 10 & 25G rates at the 10G rate. There may be good reasons that we haven't thought of that would make such behavior beneficial. There are several solutions:
 1) add a bit for 10G Discovery Window for single rate ONUs only.
 2) add a note indicating that the OLT may lie to the ONU regarding capabilities to force registration at 10G rate.
 SuggestedRemedy
 I would prefer option 1.
 Reflect any changes in 144.3.9 also
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.7.3 P215 L45 # 231
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 The description of RegStart does sound like an integer.
 SuggestedRemedy
 Change type to "32-bit unsigned integer"
 Proposed Response Response Status O

Cl 144 SC 144.3.7.8 P218 L36 # 234
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 "Registered" should be in italics
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.3.7.3 P215 L53 # 232
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 The description of SpSeq does sound like an integer.
 SuggestedRemedy
 Change type to "32-bit unsigned integer"
 Proposed Response Response Status O

Cl 144 SC 144.3.7.8 P219 L9 # 235
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 In valid symbol in exit criteria from WAIT_FOR_SYNC "msgSyndPattern.Index >>?<<
 SpSeq
 SuggestedRemedy
 Replace "?" with less than or equal to symbol
 Proposed Response Response Status O

Cl 144 SC 144.3.7.4 P216 L12 # 352
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Of the items in the a) to f) list, one ends in a period, the rest do not. Use consistent lines endings.
 SuggestedRemedy
 Editor to choose how to have consistent (or appropriate) line endings
 Proposed Response Response Status O

Cl 144 SC 144.3.7.8 P219 L9 # 12
 Hajduczenia, Marek Charter Communications
 Comment Type TR Comment Status X
 Wrong symbol in line: "?"
 SuggestedRemedy
 Likely it is supposed to be "!="
 Proposed Response Response Status O

Cl 144 SC 144.3.7.5 P216 L48 # 233
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type ER Comment Status X
 No variable name MsgRegsiter is used. Maybe should be MsgRegister?
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Comments Received

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Cl 144 SC 144.3.7.8 P219 L36 # 353
 Laubach, Mark Broadcom
 Comment Type T Comment Status X
 In Figure 144-22, is there a blank line in the middle of the steps in COMMIT_DISC_ENV or is something technical missing?
 SuggestedRemedy
 Verify if something missing, and if so fix it. If it is indeed a blank line consider removing.
 Proposed Response Response Status O

Cl 144 SC 144.3.8 P220 L8 # 237
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 It would be useful to the reader to refer back to Figure 144-3 & 144-4.
 SuggestedRemedy
 At the end of the first para add: "The following description of the granting process makes use of the interfaces and functional blocks found in Figure 144-3 and Figure 144-4."
 Proposed Response Response Status O

Cl 144 SC 144.3.7.8 P219 L49 # 316
 Lyskey, Eric Broadcom
 Comment Type E Comment Status X
 In Figure 144-22, timestampDrift should be capitalized.
 SuggestedRemedy
 Change to TimestampDrift.
 Proposed Response Response Status O

Cl 144 SC 144.3.8.1 P220 L36 # 238
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 The description of MPCP_PROCESS_DLY and GATE_TIMEOUT does sound like an integer.
 SuggestedRemedy
 Change type to "32-bit unsigned integer"
 Proposed Response Response Status O

Cl 144 SC 144.3.8 P220 L3 # 236
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 see 1.4.278 should be a live link
 SuggestedRemedy
 per comment
 Proposed Response Response Status O

Cl 144 SC 144.3.8.1 P220 L40 # 301
 Wienckowski, Natalie General Motors
 Comment Type E Comment Status X
 Use a non-breaking space in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual, not a comma.
 SuggestedRemedy
 Change: 6,400
 To: 6 400 or 6400 as 4 digit numbers don't have to have the space unless they are in a column with larger numbers.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.8.1 P220 L47 # 302

Wienckowski, Natalie General Motors

Comment Type E Comment Status X

Use a non-breaking space in number that have 4 or more digits to the left of the decimal per 13.3.2 of the 2014 IEEE-SA Style Manual, not a comma.

SuggestedRemedy

Change: 19,531,250
To: 19 531 250

Proposed Response Response Status O

Cl 144 SC 144.3.8.1 P220 L47 # 239

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status X

Assuming GATE_TIMEOUT really is a constant as implied then 50 ms is not the default value, it is the only allowed value.

SuggestedRemedy

Strike ", default value"

Proposed Response Response Status O

Cl 144 SC 144.3.8.3 P221 L4 # 240

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status X

This variable is stated as a Boolean array and it is confusing to refer to it as "A Boolean that represents"

SuggestedRemedy

Change:
"A Boolean that represents" to
"Each element in this Boolean array represents"

Proposed Response Response Status O

Cl 144 SC 144.3.8.3 P221 L22 # 241

Remein, Duane Futurewei Technologies, Inc.

Comment Type T Comment Status X

In all other variable definitions we give the size of the variable or field, we should here also.

SuggestedRemedy

Change as follows:
"LLID: LLID" -> "LLID: the 16-bit LLID"
StartTime: Start time" -> "StartTime: the 32-bit start time"
"Length: The length" -> "Length: the 22-bit length"
observe proper italics format.

Proposed Response Response Status O

Cl 144 SC 144.3.8.6 P222 L22 # 305

Kramer, Glen Broadcom

Comment Type E Comment Status X

"An array 16-bit elements" is missing "of"

SuggestedRemedy

Change to "An array of 16-bit elements"

Proposed Response Response Status O

Cl 144 SC 144.3.8.7 P222 L33 # 242

Remein, Duane Futurewei Technologies, Inc.

Comment Type TR Comment Status X

Given only one requirement maps to this clause there should ideally be only one shall statement.

SuggestedRemedy

Change:
"The OLT shall implement the GATE Generation state diagram as shown in Figure 144–23. A separate instance of the state diagram shall be implemented per each registered ONU (PLID)." to
"The OLT shall implement a separate instance for each registered ONU (PLID) of the GATE Generation state diagram as shown in Figure 144–23."
No change to PICS needed.

Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.3.8.8 P223 L40 # 244
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 There does not appear to be any field defined as MsgGate.ChMap
 SuggestedRemedy
 Change to MsgGate.ChannelMap (2x in this SD) as used elsewhere and defined in 144.3.6.1.
 Proposed Response Response Status O

Cl 144 SC 144.3.8.8 P223 L40 # 243
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Ampersand as an operator is not included in our list of conventions.
 SuggestedRemedy
 Use "AND"
 Proposed Response Response Status O

Cl 144 SC 144.3.8.11 P226 L8 # 13
 Hajduczenia, Marek Charter Communications
 Comment Type TR Comment Status X
 Undefined primitive: MPRS_CTRL?
 SuggestedRemedy
 Is MCRS_CTRL intended?
 Proposed Response Response Status O

Cl 144 SC 144.3.9.1 P227 L6 # 14
 Hajduczenia, Marek Charter Communications
 Comment Type E Comment Status X
 Table 144-9 has very inconsistent line width
 SuggestedRemedy
 Align with standard for 802.3 drafts
 Proposed Response Response Status O

Cl 144 SC 144.3.9.1 P227 L10 # 245
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Allowing 15G-EP and 50G-EP ON ON
 to cross the line is confusing.
 SuggestedRemedy
 ensure "EPON" appears on a single line
 Proposed Response Response Status O

Cl 144 SC 144.4.2 P229 L28 # 246
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Shouldn't this be the "CCP Client" not the "MPMC Client" (at least per Figure 144-3, 4, 28 & 29)? This seems to be a common error throughout 144.4 however there also appear to be a few cases where MPCM Client is correct. Below is a list of suspect uses (pg/line & quote.
 229/35 local MPMC Client,
 229/37 OLT MPMC Client,
 229/46 local MPMC Client,
 230/17 MPMC Client initiates,
 230/34 MPMC Client initiates,
 231/3 MPMC Client initiates,
 231/24 MPMC Client initiates,
 231/37 MPMC Client may monitor,
 231/39 MPMC Client may (this instance may be OK check carefully),
 231/41 notify the MPMC Client,
 231/44 the MPMC Client at the ONU.
 238/25 MPMC Client and is processed

SuggestedRemedy
 per comment
 We could consider just changing the four figures as that would be less invasive than what is suggested in this comment. Note that CCP Client does not appear in the draft at this time (including top level layering diagrams such as 144-2).
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.4.2 P229 L44 # 247
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Add clarification to the statement "Any non-persistent changes are reverted upon ONU reset and re-registration."
 SuggestedRemedy
 Add to the end of the sentence "(i.e., the channel reverts to it's default state)"
 Proposed Response Response Status O

Cl 144 SC 144.4.2 P230 L1 # 248
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Does one have to change both US & DS? Seems a bit onerous to me.
 SuggestedRemedy
 Change:
 "enabling / disabling one of downstream and upstream channels" to
 "enabling / disabling one of the downstream or upstream channels"
 Proposed Response Response Status O

Cl 144 SC 144.4.2.1 P230 L4 # 249
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 What prevents the OLT from persistently disabling the only DS channel an ONU has available and thereby breaking the ONU?
 SuggestedRemedy
 Add at the end of the para "The OLT shall not disable a downstream channel at the ONU if it is the single remaining enabled channel at that ONT"
 Update PICS.
 Proposed Response Response Status O

Cl 144 SC 144.4.2.1 P230 L13 # 319
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 It says in 144.1.4.1 that the definition and behavior of the MPMC Client is outside the scope of this standard. There is quite a bit of text in 144.4.2.1, 144.4.2.2, 144.4.2.3, and 144.4.2.4 that seems to describe the behavior of the MPMC Client. Specifically, there is text that says when the OLT starts and stops granting the ONU. A lot of the text in these subclauses is duplicated and not necessary.
 SuggestedRemedy

Remove all text in 144.4.2.1 starting with page 230 line 13. Remove all text in 144.4.2.2 starting with page 230 line 32. Remove all text in 144.4.2.3 starting with page 231 line 1. Remove all text in 144.4.2.4 starting with page 231 line 22.
 Proposed Response Response Status O

Cl 144 SC 144.4.2.1 P230 L19 # 318
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 ccp_timer and CCP_RETRY_LIMIT not defined.
 SuggestedRemedy
 Remove steps i and ii in four places: 144.4.2.1, 144.4.2.2, 144.4.2.3, and 144.4.2.4.
 Proposed Response Response Status O

Cl 144 SC 144.4.2.5 P231 L38 # 250
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type E Comment Status X
 Grammar typo
 SuggestedRemedy
 change:
 "allowing the ONU notify the OLT" to
 "allowing the ONU to notify the OLT"
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.4.2.5 P231 L41 # 320
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 Behavior of MPMC Client.
 SuggestedRemedy
 Remove all text in 144.4.2.5 beginning with line 41. Replace with: To notify the MPMC Client at the OLT about a local channel state change, the MPMC Client at the ONU may send an unsolicited CC_RESPONSE CCPDU to the OLT, indicating the new state of all of its downstream and upstream channels.
 Proposed Response Response Status O

Cl 144 SC 144.4.3 P232 L7 # 49
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "For CCPDUs originating at the OLT, this can be the" to "For CCPDUs originating at the OLT, this may be the"
 Proposed Response Response Status O

Cl 144 SC 144.4.3 P232 L16 # 251
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type T Comment Status X
 Figure 144-30 does not include an "OperandList" as indicated by this text.
 SuggestedRemedy
 In Figure 144-30 change "Data/Reserved" to "OperandList/Reserved"
 Proposed Response Response Status O

Cl 144 SC 144.4.3.1 P233 L9 # 252
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 Opcode in Figures 144-31 & 32 do not agree with the text.
 SuggestedRemedy
 Align figures and text; CC_REQUEST should use Opcode 20 and CC_RESPONSE Opcode 21 (text is correct).
 Proposed Response Response Status O

Cl 144 SC 144.4.3.1 P233 L21 # 321
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 If the intent is to reserve space for support of up to 16 channels in the future, the space in the frame should be reserved for both downstream and upstream status.
 SuggestedRemedy
 In Figure 144-31, add 14 octets of Reserved following StatusUC1. Adjust the pad.
 Proposed Response Response Status O

Cl 144 SC 144.4.3.1 P234 L14 # 253
 Remein, Duane Futurewei Technologies, Inc.
 Comment Type TR Comment Status X
 What prevents the "previous persistent state" for one channel combined with "previous persistent state" for another change from creating an ONU with all channels disabled and thereby appear to be broken?
 SuggestedRemedy
 Add footnote to PersistenceFlag = 1
 1 The ONU shall refuse any instruction that would result in persistently disabling all channels in a given direction.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 144 SC 144.4.3.2 P234 L42 # 322
 Lynskey, Eric Broadcom
 Comment Type T Comment Status X
 If the intent is to reserve space for support of up to 16 channels in the future, the space in the frame should be reserved for both downstream and upstream actions.
 SuggestedRemedy
 In Figure 144-32, add 14 octets of Reserved following ActionUC1. Adjust the pad.
 Proposed Response Response Status O

Cl 144 SC 144.5.4.4 P242 L53 # 354
 Laubach, Mark Broadcom
 Comment Type E Comment Status X
 Tables in the PICS need bottom ruling enabled.
 SuggestedRemedy
 Make it so.
 Proposed Response Response Status O

Cl 144 SC 144.4.4.1 P236 L11 # 15
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 Wrong table reference in CH_STATE_ABSENT, CH_STATE_DISABLED_REMOTE, CH_STATE_ENABLED.
 SuggestedRemedy
 Change Table 144-11. to Table 144-12.
 Proposed Response Response Status O

Cl 149 SC 149.1.3 P71 L27 # 476
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 PCS layer label is inconsistent with Figure 44-1 and Figure 125-1.
 SuggestedRemedy
 Change: "RS-FEC PCS"
 To: "64B/65B RS-FEC PCS"
 Proposed Response Response Status O

Cl 144 SC 144.4.4.4 P238 L23 # 50
 Hajduczenia, Marek Charter Communications
 Comment Type ER Comment Status X
 "can" used and not intended per Style Guide
 SuggestedRemedy
 Change "(array element) can be accessed" to "(array element) is accessed"
 Proposed Response Response Status O

Cl 149 SC 149.1.3.1 P72 L38 # 479
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Missing dashes.
 SuggestedRemedy
 Change: "3260 bit block"
 To: "3260-bit block", in 2 locations
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl 149 SC 149.3.2.2.4 P89 L24 # 468
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Figure 149-6 lacks arrow ends on TXD<32> and TXD<63>.
 SuggestedRemedy
 Add arrow ends on TXD<32> and TXD<63>.
 Proposed Response Response Status O

Cl 149 SC 149.3.9 P120 L20 # 477
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Missing space
 SuggestedRemedy
 Change: "OAM10-bit"
 To: "OAM 10-bit"
 Proposed Response Response Status O

Cl 149 SC 149.3.9.3 P128 L1 # 478
 Brandt, David Rockwell Automation
 Comment Type E Comment Status X
 Should this refer to the "State Variables to OAM Register Mapping" that were edited in Clause 97 to be BASE-T1? Why do they need to appear twice?
 SuggestedRemedy
 Refer to the modified Clause 97 Table 97-6 for the BASE-T1 mappings and then define the additional mappings for MultiGBASE-T1.
 Proposed Response Response Status O

Cl 149 SC 149.5.3.1 P160 L11 # 469
 Brandt, David Rockwell Automation
 Comment Type T Comment Status X
 I don't see where the frame error ratio comes from. If I assume this is actual MAC data with addresses and FCS, I get FER = 1e-12 * (800 + 22) * 8 = 6.6e-9. I note that 149.5.3.2 does not add any MAC frame overhead.
 SuggestedRemedy
 Please check the math or describe better.
 Proposed Response Response Status O

Cl 149 SC 149.5.3.2 P160 L20 # 470
 Brandt, David Rockwell Automation
 Comment Type T Comment Status X
 149.5.3.1 seem inconsistent. 149.5.3.1 has "frame error ratio", but wouldn't these frames crossing XGMII also be counted as 149.5.3.2 "frame loss ratio" when they get to the MAC? There should be no further correction after RS-FEC. Both use the same link segment specified in 149.7.
 SuggestedRemedy
 Consider whether the same terminology, packet sizes and measurement points can be used.
 Proposed Response Response Status O

Cl 149 SC 149.9.2.2 P169 L41 # 471
 Brandt, David Rockwell Automation
 Comment Type T Comment Status X
 This paragraph has 2 shalls that apply to entire products. The seems out of our scope.
 SuggestedRemedy
 Suggest the "shalls" be replaced with text in the spirit of the last sentence of the paragraph.
 Change1st: "shall", To: "is expected be able to"
 Change 2nd: "shall be tested", To: "is expected to allow products to be tested"
 Delete: ES4 and ES5.
 Proposed Response Response Status O

Comments Received

IEEE P802.3ca D2.0 25/50G-EPON Task Force Initial Working Group ballot comments

Cl **Content** *SC* **Contents** *P20* *L46* # 428
Dawe, Piers Mellanox
Comment Type **E** *Comment Status* **X**
Annex 31A (normative) Annex 142A (normative) 142A.1 Example of initial control seed sequence
2A.2QC-LDPC FEC Encoder Test Vectors
SuggestedRemedy
Sort out formatting / document structure
Proposed Response *Response Status* **O**

Cl **TOC** *SC* **TOC** *P20* *L46* # 271
Kramer, Glen Broadcom
Comment Type **E** *Comment Status* **X**
TOC entries 31A, 142A and 142A.1 all got concatenated into a single entry
SuggestedRemedy
Fix TOC format
Proposed Response *Response Status* **O**