Cl **FM** *SC* *P* **1** *L* **27** # 275

Marris, Arthur Cadence Design Systems

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

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* **W**

PROPOSED ACCEPT.

Cl **FM** *SC* **FM** *P* **9** *L* **5** # 436

Powell, William Nokia

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

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* **W**

PROPOSED ACCEPT.

Cl **FM** *SC* **FM** *P* **10** *L* **49** # 59

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

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Update FrontMatter to the latest version available.

Include summary description of IEEE Std 802.3ca™-201x as follows:

Amendment X-This amendment to IEEE Std 802.3-2018 extends the operation of Ethernet Passive Optical Networks (EPONs) to multiple channels of 2 5 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 amendment 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. The EPON operation is defined for distances of at least 20 km, and for a split ratio of at least 1:32.

Cl **00** *SC* **0** *P* *L* # 63

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

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Delete all the PICS for the damage threshold and associated labelling (e.g., PQG2510D2F3)

Cl **00** *SC* **0** *P* **0** *L* **0** # 466

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED ACCEPT.

Cl **00** *SC* **0** *P* **0** *L* **0** # 467

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED ACCEPT.

Cl **1** *SC* **1.3** *P* **22** *L* **8** # 430

Dawe, Piers Mellanox

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

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.562-2016, 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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add a new reference to G.652-2016, leaving G.652-2009 in place. This will allow existing clauses to be pointed to the right location. Make all references to G.652 in .3ca dated 2016.

Cl **1** *SC* **1.4.244a** *P* **23** *L* **18** # 459

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED REJECT.

When selecting the term "envelope", the TF has reviewed the base document to ensure there was no conflict of terms. In the existing body of IEEE Std 802.3, the word "envelope" mostly used in two contexts:
1) "envelope frame(s)" - always used as this combination of words
2) Envelope of a signal - always clear from the PMD focus of a given clause.
The TF felt that using the word "envelope" by itself in EPON-related clauses will not be confusing to readers. However, the term "timing envelope" may be confusing because the term "envelope" is not related to time, but rather it is related to a number of bits/octets being transmitted or received.

Cl **1** *SC* **1.4.244b** *P* **23** *L* **22** # 460

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED REJECT.

There are no other "envelopes" used in the standard today, so there is no confusion with other terms. The term itself is defined as a term (1.4.244a) and used consistently throughout the draft.

Cl **1** *SC* **1.4.244b** *P* **23** *L* **23** # 28

Hajduczenia, Marek Charter Communications

Comment Type **ER** *Comment Status* **D** *can-vs-may*

"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* **W**

PROPOSED REJECT.

“Can” (i.e., “is able” or “is capable”) is correct and is intended. “May” (i.e., “is allowed” or “is permitted”) is semantically wrong here.

Cl **1** *SC* **1.4.244c** *P* **23** *L* **26** # 461

Thompson, Geoff GraCaSI S.A./Independent

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

The parameters to not “describe” the timing envelope, they are its defining parameters.

SuggestedRemedy

Change “describe” to “define”.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **1** *SC* **1.4.244c** *P* **23** *L* **26** # 433

Dawe, Piers Mellanox

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Both tuple and sequence are wrong here as the ordered set assumes a set of homogenous elements. There is nothing ordered in envelope descriptor.

1.4.244c Envelope descriptor: A record consisting of the following set of parameters: LLID, StartTime, and EnvLength. An envelope descriptor describes a specific envelope pending transmission. Envelope descriptors are generated by the local MPCP sublayer and are passed to MCRS at the appropriate time to start the envelope transmission.

Cl **1** *SC* **1.4.244d** *P* **23** *L* **30** # 462

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change definition to read: An MCRS-specific marker that is inserted at the beginning of every envelope (Envelope Start Header) and in place of every frame preamble (Envelope Continuation Header). The envelope header includes fields that identify the LLID that sourced the encapsulated data and the length of the data (in units of EQ). Envelope headers also include CRC8 field used to detect bit errors.

Cl **1** *SC* **1.4.245a** *P* **23** *L* **33** # 463

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This is a fair observation. MAC and MAC Client are not aware of this quantization. The EPON-specific MAC Control and MAC Control Client (out-of-scope for 802.3) are aware of it, just like in previous EPON generations, the MAC Control and MAC Control Client were aware of quantization unit TQ (time quantum). Change the definition as shown below:

1.4.245a Envelope Quantum: A unit of information volume. Each envelope quantum represents 64 bits of data plus the layer-specific encoding. Thus, at the MAC >>>Control<<< sublayer and above, an envelope quantum is equal to 64 bits. Within the MCRS, an envelope quantum contains 72 bits (i.e., 64 bits of data and 8 bits of control). Within PCS, after the 64B/66B encoding, an envelope quantum contains 66 bits.

Cl **1** *SC* **1.4.245a** *P* **23** *L* **35** # 112

Remein, Duane Futurewei Technologies, Inc.

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

If modified as proposed, the definition would be incomplete, since it mentions MAC and higher sublayers, MCRS, but would ignore PCS. It is better to extend the definition as follows: "Within PCS, after the 64B/66B encoding, an envelope quantum contains 66 bit, and after 256B/257B encoding, four enevelope quanta are packed into a single 257-bit block."

Cl **1** *SC* **1.4.245b** *P* **23** *L* **38** # 465

Thompson, Geoff GraCaSI S.A./Independent

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

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* **W**

PROPOSED REJECT.

For the OLT to be able to schedule a mix of 25G and 10G upstream transmissions (for the 25G/25G and 25G/10G coexistence mode), the scheduler needs to have some common reference unit. The EQT was specifically introduced to not depend of bit times. A transmission time of 1 EQ in downstream direction is exactly 1 EQT. In the upstream direction, for ONUs transmitting at 25Gb/s, the transmission time of 1 EQ is also 1 EQT. But for ONUs transmitting at 10Gb/s, the transmission time of 1 EQ is 2.5 EQTs. In other words, EQT is a fixed interval, regardless of the line rate or bit times. It is correct that in some future EPON projects (which don’t seem to end), the value of EQT may be different. We expect a future task force to deal with this by making this definition clause- or PON architecture-specific.

Cl **1** *SC* **1.4.278** *P* **22** *L* **31** # 431

Dawe, Piers Mellanox

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The proposed changes would make the definition even more confusing. Use the following updated definition:

1.4.278 Grant: Within P2MP protocols, a permission to transmit at a specific time, for a specific duration. Grants are issued by the OLT (master) to ONUs (slaves) by means of GATE messages. In Clause 64 and Clause 77, a GATE MPCPDU contains one or multiple grants issued to a single LLID, with each grant resulting in one or multiple upstream bursts transmitted by the ONU. In Clause 144, a grant includes envelope allocations for multiple LLIDs and there is a one-to-one correspondence between the grants issued to an ONU and upstream bursts transmitted by that ONU, i.e., a grant issued to an ONU results in a single upstream burst transmitted by that ONU. The OLT conveys a grant to the ONU using one or multiple GATE MPCPDUs, all having the same StartTime values.

Cl **30** *SC* **30.3.5.1.4** *P* **26** *L* **38** # 327

Laubach, Mark Broadcom

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

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* **W**

PROPOSED ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **27** *L* **2** # 392

Dawe, Piers Mellanox

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

Multiple aMAUTypes with the same description

SuggestedRemedy

Add words to distinguish them

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Apply the following changes to MAU description, using 25GBASE-PQG as an example:

25GBASE-PQG-D2 One single mode fiber, 1x25G continuous transmission / 1x25G burst mode reception, medium power class, as specified in Clause 141
25GBASE-PQG-D3 One single mode fiber, 1x25G continuous transmission / 1x25G burst mode reception, high power class, as specified in Clause 141
25GBASE-PQG-U2 One single mode fiber, 1x25G burst mode transmission / 1x25G continuous reception, medium power class, as specified in Clause 141
25GBASE-PQG-U3 One single mode fiber, 1x25G burst mode transmission / 1x25G continuous reception, high power class, as specified in Clause 141

Cl **45** *SC* **45.2.1.23a.1** *P* **29** *L* **41** # 16

Hajduczenia, Marek Charter Communications

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

New "shall" statements were added, but updates to PICS are missing

SuggestedRemedy

Updates PICs per hajduczenia_3ca_1_0719.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.134a** *P* **31** *L* **10** # 393

Dawe, Piers Mellanox

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

Table title wraps too short

SuggestedRemedy

Make the text box for table title wider

Proposed Response *Response Status* **W**

PROPOSED REJECT.

When attempting to fit the whole title in a single line, 2-3 characters flow into line 2. Title was forced to be this way on purpose.

Cl **45** *SC* **45.2.1.134a** *P* **31** *L* **15** # 76

Anslow, Pete Ciena

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

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* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.1.18aa** *P* **33** *L* **36** # 472

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

Misspelling

SuggestedRemedy

Change: "abilitiy", To: "ability"

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

No such spelling "abilitiy" found in the draft. Given that 45.2.1.18 does not exist in the draft - is this a comment against P803.2ca?

Cl **45** *SC* **45.2.1.18ab** *P* **33** *L* **43** # 473

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

Misspelling

SuggestedRemedy

Change: "abilitiy", To: "ability"

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

No such spelling "abilitiy" found in the draft. Given that 45.2.1.18 does not exist in the draft - is this a comment against P803.2ca?

Cl **45** *SC* **45.2.3.6.1** *P* **39** *L* **40** # 117

Remein, Duane Futurewei Technologies, Inc.

Comment Type **TR** *Comment Status* **D** *45.2.3.6.1*

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #80

Cl **45** *SC* **45.2.3.6.1** *P* **39** *L* **41** # 80

Anslow, Pete Ciena

Comment Type **T** *Comment Status* **D** *45.2.3.6.1*

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>: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* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.45a** *P* **43** *L* **43** # 307

Lynskey, Eric Broadcom

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

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* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.45a** *P* **43** *L* **47** # 118

Remein, Duane Futurewei Technologies, Inc.

Comment Type **TR** *Comment Status* **D** *Table 45-217a*

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* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.45a** *P* **43** *L* **47** # 90

Anslow, Pete Ciena

Comment Type **ER** *Comment Status* **D** *Table 45-217a*

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* **W**

PROPOSED ACCEPT.

Cl **45** *SC* **45.2.3.45a** *P* **43** *L* **47** # 448

Nicholl, Shawn Xilinx

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

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 acronymn would work, too.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

Terms are defined consistently. There are many other examples of overlaping acronyms tat do not cause confusion, when read within the right context.

Also, please note that SP1, SP2, and SP3 are already used to represent two very different things: Service Primitives in C73 and Skew Points in C80 and 83

Cl **45** *SC* **45.2.3.45a** *P* **44** *L* **10** # 120

Remein, Duane Futurewei Technologies, Inc.

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

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* **W**

PROPOSED ACCEPT.

Hardly a TR comment material

Cl **45** *SC* **45.2.3.80.2** *P* **49** *L* **31** # 474

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

Duplicate text

SuggestedRemedy

Change: "is detecting is detecting", To: "is detecting"

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Issue not located. Given that 45.2.3.80.2 does not exist in the draft - is this a comment against P803.2ca?

Cl **45** *SC* **45.2.3.80.4** *P* **49** *L* **47** # 475

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

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* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Issue not located. Given that 45.2.3.80.4 does not exist in the draft - is this a comment against P803.2ca?

Cl **56** *SC* **56.1** *P* **47** *L* **3** # 399

Dawe, Piers Mellanox

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

Undefined terms "Control Plane", "Data Plane"

SuggestedRemedy

Explain

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change all instances of "Control Plane" to
"MAC Control Clients", and "Data Plane" to "MAC Clients"

Cl **56** *SC* **56.1** *P* **47** *L* **3** # 400

Dawe, Piers Mellanox

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #399

Cl **56** *SC* **56.1.2** *P* **46** *L* **38** # 378

Dawe, Piers Mellanox

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

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* **W**

PROPOSED REJECT.

The nominal (how quickly MAC transmits bits, i.e., what the resulting bit time is) MAC rate is correct in here, the effective MAC rate (how many bits it can effectively transmit within a second) is lower and affected by FEC overhead, just like any other PHY that uses FEC and PCS encoding. MAC does not always transmit data, but when it does, it transmits it at 25Gb/s

Cl **56** *SC* **56.1.2** *P* **46** *L* **52** # 396

Dawe, Piers Mellanox

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

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* **W**

PROPOSED REJECT.

“Channel” is not equivalent to “Wavelength”. Channels are defined in MCRS, PCS, and PMA, which are not aware of wavelengths. There are also several sets of wavelength defined for different coexistence classes, and each channel may map to a different wavelength in a different coexistence class. It is possible in some future project to map multiple channels into a single wavelength. The term “channel” is fundamental to the specifications in clause 143. It is very precisely defined and that definition is confined to .3ca only.

Cl **56** *SC* **56.1.2** *P* **47** *L* **19** # 397

Dawe, Piers Mellanox

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

"PCS channel" is new, may need more introduction.

SuggestedRemedy

Are there two independent, parallel PCSs or are they linked (how)?

Proposed Response *Response Status* **W**

PROPOSED REJECT.

No specific text was proposed at this time.

Cl **56** *SC* **56.1.2** *P* **47** *L* **52** # 257

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

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

Diagram not drawn in consistent manner with other similar diagrams in Clause 56.
Example- the vertial 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* **W**

PROPOSED REJECT.

Diagram is consistent with style in other .3ca clauses.

Cl **56** *SC* **56.1.3** *P* **50** *L* **25** # 398

Dawe, Piers Mellanox

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

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* **W**

PROPOSED ACCEPT.

Cl **56** *SC* **56.1.3** *P* **51** *L* **6** # 427

Dawe, Piers Mellanox

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

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* **W**

PROPOSED REJECT.

The clause order follows the clause order used by EPON projects before.

Cl **56** *SC* **56.1.3** *P* **54** *L* **5** # 284

Wienckowski, Natalie General Motors

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

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* **W**

PROPOSED ACCEPT.

Cl **67** *SC* **67** *P* **55** *L* **1** # 326

Laubach, Mark Broadcom

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

As proposed, but rather with the followinv changes:
- "50000" to "50 Gb/s",
- "25000" to "25 Gb/s"
- "10000" to "10 Gb/s"
Discuss at the meeting whether we also want to get rid of 10000 and 1000 values for earlier EPON generation - it is hard to look at.

Cl **142A** *SC* **142A.1** *P* **249** *L* **51** # 445

Powell, William Nokia

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

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* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change text of the editorial note to
Editor's Note (to be removed prior to publication): At publication time machine readable files will be
published under http://standards.ieee.org/downloads/802.3/ in a machine readable format.
Tables are accessible right now at: http://www.ieee802.org/3/ca/index.shtml

Cl **149** *SC* **149.1.3** *P* **71** *L* **27** # 476

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

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* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.1.3.1** *P* **72** *L* **38** # 479

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

Missing dashes.

SuggestedRemedy

Change: "3260 bit block"
To: "3260-bit block", in 2 locations

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.3.2.2.4** *P* **89** *L* **24** # 468

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

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* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.3.9** *P* **120** *L* **20** # 477

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

Missing space

SuggestedRemedy

Change: "OAM10-bit"
To: "OAM 10-bit"

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.3.9.3** *P* **128** *L* **1** # 478

Brandt, David Rockwell Automation

Comment Type **E** *Comment Status* **D** *wrong-ballot*

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* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.5.3.1** *P* **160** *L* **11** # 469

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **D** *wrong-ballot*

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 farme overhead.

SuggestedRemedy

Please check the math or describe better.

Proposed Response *Response Status* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.5.3.2** *P* **160** *L* **20** # 470

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **D** *wrong-ballot*

149.5.3.1 seem inconsistenmt. 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* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?

Cl **149** *SC* **149.9.2.2** *P* **169** *L* **41** # 471

Brandt, David Rockwell Automation

Comment Type **T** *Comment Status* **D** *wrong-ballot*

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* **Z**

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I do not think this draft includes clause 149. Wrong project?