*Cl* **00** *SC* *P* **97** *L* **52** # 1773

KIMURA, Mitsunobu Hitachi Communicatio

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

Title of Figure 76-2 has a period (".").

*SuggestedRemedy*

The period should be removed.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c00
Gloablly remove trailing periods from figure and table captions.

*Cl* **00** *SC* **0** *P* *L* # 2251

Ganga, Ilango Intel

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

Editing instructions and Editors notes throughout the document are printed in RED color. Per IEEE style manual 21.1 the instructions are in Bold Italics. Change this to black color, bold italics.

This red typically is used to indicate change in compare documents.

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Update in Style guide, import to all clauses.

*Cl* **00** *SC* **0** *P* *L* # 2196

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

After reading the draft, I find myself wondering whether a network efficiency analysis of the new 10G-EPON extensions has been done and compared to legacy E-PON as well as G-PON in terms of % utilization and throughput for representative network configurations of the 6 different physical layer types? If this has been done, great. If not, please consider it as a means to identify any efficiency hits that may be taking place, or major beneficial effects.

*SuggestedRemedy*

Make analysis available if such has not already been done, or explain why it is unnecessary.

*Response* *Response Status* **C**

REJECT.
This was discussed during TF deliberations but does not belong in the standard. Please see meeting materials available on the TF WEB site.

*Cl* **00** *SC* **0** *P* *L* # 2169

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED], defer*

several cross references, denoted '@@subclause xx.x.x.x.x' are not updated in this draft. I found enough of them so that rather than list them all, it seems better to suggest a global update at an appropriate time.

*SuggestedRemedy*

correct cross references before issuing next draft

*Response* *Response Status* **C**

ACCEPT.

*Cl* **00** *SC* **0** *P* *L* # 2171

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **A** *ƎE PROCESSED], PageNum*

While reading early sections (30 - 66), many questions arose regarding the justification for 6 new PHY types with different split (1:16, 1:32) and reach (10 km, 20 km) capabilities. The fact that an explicit objective for the task force was defined with these aspects did not present itself until clause 75. For purposes of the document, the definition of the objective is sufficient. Not being a part of that process, I continue to have questions about these choices, however, for which explanatory matter might be helpful.

*SuggestedRemedy*

Consider enumerating 10G-EPON objectives in an early part of the document, along with inclusion of more informative material or references to such in the objectives discussion in clause 75.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Include objectives in Frontmatter abstract.

*Cl* **00** *SC* **0** *P* *L* # 2172

Woodward, Ted Telcordia Technologie

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

in my printout, page numbers were cut off. I directly printed the pdf document on a common (HP8150) laser printer from the PDF files using the latest release of Adobe Acrobat Reader. Unfortunately, this means that I cannot provide page number references in my comments.

*SuggestedRemedy*

check ability to print on more types of laser printers to make sure page numbers appear.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Elevate footer some.

*Cl* **00** *SC* **0** *P* *L* # 181552

Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A** *PROCESSED], resubmit xref*

Mailto links still present for some cross references [MH: subclause numbers were updated, page number were not updated for D2.0].
1 page 10 line 17
1.4.95 page 12 line 28
30 page 13 line 18
45 page 16 line 19
56 page 27 line 18
66 page 37 line 18
66.4.2.1 page 38 line 41
66.4.2.2 page 39 line 3
66.4.2.3 page 29 line 13
66.5.4.5 page 40 9 locations
67 page 41 line 6
91 page 42 line 9
92 page 85 line 25
76.1.1 page 86 line 46 two locations
76.1.3 page 91 line 5
76.1.3 page 91 line 11
76.1.5 page 91 line 47
76.1.6 page 91 line 53
76.1.6 page 92 line 1
76.1.6.1.4 page 93 line 10
76.1.6.2.1 page 95 line 5
76.1.6.2.2 page 95 line 16
76.1.6.2.3 page 95 line 38
76.1.6.2.3.3 page 96 line 43
76.2.2.1.2 page 100 line 37
76.2.2.1.3 page 101 line 18
76.2.2.2 page 103 line 51
76.2.2.3 page 104 line 3
76.2.2.4.1 page 103 line 35
76.2.2.5.2 page 110 line 6
76.2.2.6 page 111 line 47
76.2.3.2.1 page 117 line 12
76.2.3.3.3 page 121 line 41
76.2.3.3.4 page 122 line 24
76.2.3.3.4 page 122 line 25
76.2.3.4 page 123 line 6
76.2.3.4 page 123 line 7
76.2.3.4.2 page 123 line 39
76.2.3.5 page 124 line 44
76.2.3.6 page 124 line 49
76.2.3.7 page 125 line 13
76.2.3.7 page 125 line 14
76.2.3.7.3 page 126 line 40
76.3 page 127 Table 76-5 five locations
76.3.1.2 page 129 line 6
76.4.4.9 page 134 line 27
76A page 135 line 19
93 page 142 line 6
77.3.2.3 page 165 line 27
.3.3.2 page 170 line 51

*SuggestedRemedy*

Remove all mailto links from the document. Make all cross references to other subclauses within the draft functional.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2264

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft

Global replace all instances of:
"Clause @@" with "@@Clause "
and

"Subclause @@" with "@@Subclause"
This will resolve the mailto issue.
The editors will activate any new or modified cross references that directly link within the draft book.
Editors may defer activating all non-modified links to a later release depending on time available for creating next draft.

==========

*Cl* **00** *SC* **0** *P* *L* # 2047

Kramer, Glen Teknovus, Inc.

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

Usage of i.e. (id est) is inconsistent

Always should be "i.e." (two periods). Depending on style, can follow with a comma.

In draft, we have
5 occurences of "i.e."
4 occurences of "i.e.,"
5 occurences of "ie."

*SuggestedRemedy*

Use consistent style. Author's preference is "i.e.,"

Do global search and replace.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **00** *SC* **0** *P* *L* # 2424

DIAB, WAEL BROADCOM

*Comment Type* **TR** *Comment Status* **R** *O BE PROCESSED], GDMO*

The GDMO definitions sectionon is missing. I would request that we complete this prior to completing WG Ballot and launching SA Ballot

*SuggestedRemedy*

Include Annex 30A and 30B

*Response* *Response Status* **U**

REJECT.
According to Motion #4 from November 2007 802.3 WG meeting, GDMO should be defined by a separate project after Clause 30 is completed. Please refer http://www.ieee802.org/3/minutes/nov07/minutes_1107.pdf.

*Cl* **00** *SC* **0** *P* *L* # 2420

DIAB, WAEL BROADCOM

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

The nomenclature used for the Gigabit technologies is inconsistant with EFM and 802.3.

*SuggestedRemedy*

Please change all references of 1GBASE to 1000BASE including in the 10/1GBASE so it is 10G/1000BASE

*Response* *Response Status* **U**

REJECT.
The nomenclature for all new PHYs was approved by the TF and presented to the 802.3 working group without significant opposition.
This is a new PMD name and does not need to use same units as 1000BASE PMDs.
10/1GBASE provides most concise name for the PMD capabilities.

Vote:
Approve this Response
For: 28
Against: 0
Abstain: 0

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2264

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *joint xref*

Missing cross references in a number of places (make sure resulting links are live):
- page 12, line 29 - "@@Subclause 75.8.1@@"
- page 14, line 14 - "Clause 76"
- page 14, line 15 - "Subclause 76.2.1.1"
- page 14, line 20 - "Clause 76"
- page 14, line 21 - "Subclause 76.2.1.1"
- page 14, line 35 - "Clause 75"
- page 14, line 37 - "Clause 75"
- page 14, line 39 - "Clause 75"
- page 14, line 41 - "Clause 75"
- page 14, line 43 - "Clause 75"
- page 14, line 45 - "Clause 75"
- page 14, line 47 - "Clause 75"
- page 14, line 49 - "Clause 75"
- page 14, line 51 - "Clause 75"
- page 14, line 53 - "Clause 75"
- page 15, line 2 - "Clause 75"
- page 20, line 14 - "@@Figure 31C-2@@"
- page 25, line 21 - "Table 45-12"
- page 30, line 32 - "@@Subclause 76.2.4.1.1.1@@"
- page 38, line 20 - "@@Clause 75@@"
- page 38, line 21 - "@@Clause 76@@"
- page 38, line 26 - "Clause 77"
- page 38, line 29 - "Clause 77.4"
- page 38, line 32 - "Figure 56-2"
- page 38, line 41 - "Clause 76"
- page 38, line 47 - "Clause 76"
- page 39, line 7 - "@@Clause 76@@"
- page 39, line 29 - "@@Clause 75@@"
- page 39, line 24 - "75"
- page 39, line 27 - "75"
- page 39, line 30 - "75"
- page 39, line 33 - "75"
- page 39, line 36 - "75"
- page 39, line 39 - "75"
- page 40, line 46 - "Table 56-3"
- page 47, line 19 - "@@Subclause 77.3.3.2@@" > "Subclause 77.3.3.2" + live cross-reference link
- page 55, line 47 - "@@Subclause 77.3.2.4@@"
- page 55, line 48 - "@@Subclause 77.2.2.1@@"
- page 55, line 52 - "@@Clause 76@@"
- page 56, line 3 - "@@Clause 76@@"
- page 56, line 12 - "@@Clause 76@@"
- page 56, line 17 - "@@Clause 76@@"
- page 56, line 24 - "@@Clause 76@@"
- page 56, line 25 - "@@Subclause 76.3.1.1@@"
- page 56, line 30 - "@@Clause 76@@"
- page 59, line 18 - "@@Clause 76@@"
- page 62, line 32 - "@@Subclause 76.2@@" > "Subclause 76.2"
- page 62, line 39 - "@@Subclause 77.3.3.2@@" > "Subclause 77.3.3.2"
- page 63, line 37 - "@@Subclause 77.3.3.2@@ > "Subclause 77.3.3.2"
- page 68, line 16 - "@@Subclause 76.2@@" > "Subclause 76.2"
- page 71, line 33 - "@@Clause 76@@" > "Clause 76"
- page 80, line 15 - "@@Subclause 76.3.2.1@@" > "Subclause 76.3.2.1"
- page 95, line 35 - "Clause 77"
- page 109, line 37 - "@@77.3.3.2@@" > "Subclause 77.3.3.2"
- page 138, line 44 - "75.3.1.4" > "Subclause 75.3.1.4"
- page 138, line 53 - "Subcause@@75.8@@" > "Subcause 75.8"
- page 139, line 11 - "@@Figure 75-3@@" > "Figure 75-3"
- page 139, line 11 - "@@Figure 75-4@@" > "Figure 75-4"
- page 139, line 12 - "@@Subclause 75.9.16@@" > "Subclause 75.9.16"
- page 139, line 20 - "@@Figure 75-3@@" > "Figure 75-3"
- page 139, line 20 - "@@Figure 75-4@@" > "Figure 75-4"
- page 139, line 22 - "@@Subclause 75.9.15@@" > "Subclause 75.9.15"
- page 144, line 27 - "@@76.3.3@@" > "76.3.3"
- page 145, line 35 - "@@Subclause 76.2.2.4.3@@" > "Subclause 76.2.2.4.3"
- page 147, line 50 - "@@Figure 76-12@@ and @@Figure 76-13@@:" > "Figure 76-12 and Figure 76-13:"
- page 148, line 34 - "@@Figure 76-12@@ and @@Figure 76-13@@" > "Figure 76-12 and Figure 76-13"
- page 149, line 1 - "@@Figure 76-12@@ and @@Figure 76-13@@" > "Figure 76-12 and Figure 76-13"
- page 150, line 1 - "@@Figure 76-12@@ and @@Figure 76-13@@" > "Figure 76-12 and Figure 76-13"
- page 150, line 32 - "76.2.3.4" > "Subclause 76.2.3.4"

Missing external reference markup on:
- page 38, line 48 - "@Subclause 61.1.4.1.2@@" > "Subclause 61.1.4.1.2"
- page 44, line 41 - "@@46.3.4@@" > "Subclause 46.3.4"
- page 45, line 3 - "@@46.3.4.2@@" > "Subclause 46.3.4.2"
- page 45, line 13 - "@@46.3.4.3@@" > "Subclause 46.3.4.3"
- page 95, line 46 - "@@46.1.7@@" > "Subclause 46.1.7"
- page 100, line 6 - "Subclause @@77.3.3@@" > "Subclause 77.3.3"
- page 100, line 11 - "Subclause @@77.1.2@@" > "Subclause 77.1.2"
- page 100, line 47 - "Clause @@46.1.6@@" > "Clause 46.1.6"
- page 100, line 54 - "Subclause @@46.1.7@@" > "Subclause 46.1.7"
- page 101, line 1 - "Subclause @@46.1.7.3@@" > "Subclause 46.1.7.3"
- page 101, line 10 - "Subclause @@21.5@@" > "Subclause 21.5"
- page 104, line 5 - "@@65.1.3.1@@" > "Subclause 65.1.3.1@
- page 104, line 16 - "@@65.1.3.2@@" > "Subclause 65.1.3.2"
- page 104, line 38 - "Subclause @@65.1.3.3@@" > "Subclause 65.1.3.3"
- page 104, line 40 - "Table @@65-2@@" > "Table 65-2"
- page 104, line 53 - "Subclause@@ 65.1.3.3.2@@" > "Subclause 65.1.3.3.2"
- page 105, line 43 - "Subclause @@65.1.3.3.3@@" > "Subclause 65.1.3.3.3"
- page 110, line 18 - "@@49.2.13.2.3@@" > Subclause 49.2.13.2.3"
- page 112, line 52 - "Subclause @@49.2.4@@" > "Subclause 49.2.4"

- page 113, line 3 - "Subclause @@49.2.6@@" > "Subclause 49.2.6"
- page 113, line 35 - "Subclause @@3.1.1@@" > "Subclause 3.1.1"
- page 121, line 36 - "Subclause @@49.2.7@@" > "Subclause 49.2.7"
- page 129, line 12 - "Subclause @@49.2.13.2.1@@" > "Subclause 49.2.13.2.1"
- page 132, line 35 - "Subclause @@49.2.13.2.3@@" > "Subclause 49.2.13.2.3"
- page 133, line 23 - "Subclause @@21.5@@" > "Subclause 21.5"
- page 133, line 24 - "Subclause @@21.5.2@@" > "Subclause 21.5.2"
- page 134, line 4 - "Subclause @@21.5@@" > "Subclause 21.5"
- page 134, line 5 - "Subclause @@21.5.2" > "Subclause 21.5.2"
- page 134, line 37 - "Subclause @@14.2.3.2@@" > "Subclause 14.2.3.2"
- page 135, line 44 - "Subclause @@49.2.10@@" > "Subclause 49.2.10"
- page 135, line 49 - "Subclause @@49.2.11@@" > "Subclause 49.2.11"
- page 136, line 14 - "Subclause @@21.5@@" > "Subclause 21.5"
- page 136, line 15 - "Subclause @@21.5.2@@" > "Subclause 21.5.2"
- page 137, line 7 - "@@49.2.13.2.3@@" > "Subclause 49.2.13.2.3"
- page 137, line 37 - "@@76.3.1@@" > "Subclause 76.3.1" - make sure hyperlink is OK
- page 137, line 39 - "@@76.3.1@@" > "Subclause 76.3.1" - make sure hyperlink is OK
- page 137, line 40 - "@@76.3.2@@" > "Subclause 76.3.2" - make sure hyperlink is OK
- page 137, line 39 - "@@65.3.1@@" > "Subclause 65.3.1"
- page 137, line 42 - "@@65.3.2@@" > "Subclause 65.3.2"

*SuggestedRemedy*

Add missing cross references to all clauses and subclauses in this draft.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Remove the word "Subclause" before each cross-reference.

---

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2342

Hajduczenia, Marek Nokia Siemens Networ

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

General comment: page numbers in the template got myseteriously very low. On some printers, the page numbers do not print correctly. Please bring the page numbers higher as e.g. in 802.3ay draft.

*SuggestedRemedy*

Please bring the page numbers higher as e.g. in 802.3ay draft. Update the draft template as necessary

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment 2172

---

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2303

Hajduczenia, Marek Nokia Siemens Networ

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

The draft makes use of terms "asymmetrical" and "asymmetric" interchangeably. Even though both are correct, it would be nice to make use of only one i.e. "asymmetric"

*SuggestedRemedy*

Replace all occurence of "asymmetrical" with "asymmetric".

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2344

Hajduczenia, Marek Nokia Siemens Networ

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

Use of i.e. is not consistent throughout the draft. There are cases of "i.e." (correct) but also of "i.e" or "ie." and other variations. Please hunt the offending versions and replace with "i.e."

*SuggestedRemedy*

See above

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment 2047

---

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2343

Hajduczenia, Marek Nokia Siemens Networ

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

Editorial notes at the beginning of the Clauses could be aligned in between the clauses to match accordingly. Please use a singular template of the editorial comments.

*SuggestedRemedy*

See above.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See Style Guide

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2346

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED], xref*

After looking at the draft with the huge quantity of @@ markers, it makes some parts of the text heardly readable, especially when several external references follow in a short block of text.
Proposal: stop using @@ markers and use e.g. green colour to mark external references, which are not hyperlinked.

*SuggestedRemedy*

See above.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **00** *SC* **0** *P* **0** *L* **0** # 2345

Hajduczenia, Marek Nokia Siemens Networ

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

Editing instructions and Editorial notes in current version of the draft are in RED. As per IEEE style manual, point 21.1, we should be using Bold Italics. Please fix it.

*SuggestedRemedy*

Change all red text blocks (editorial comments and instructions) into BOLD Italic as per IEEE Style Manual. The only red text should be only visible in markup versions signallign deletion.

*Response* *Response Status* **C**

ACCEPT.
See comment 2251

---

*Cl* **00** *SC* **0** *P* **1** *L* **56** # 1904

Dawe, Piers Avago

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

Page numbers are too low, won't print on some printers, and 2 lines lower than in published 802.3

*SuggestedRemedy*

Remove one line-feed in each of left and right page footers

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment 2172

---

*Cl* **00** *SC* **0** *P* **2** *L* **1** # 2262

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Abstract description is missing. While it is not critical for technical completeness of the draft, it is advisable to provide an abstract and a more complete list of keywords.

*SuggestedRemedy*

Use the abstract and the list of keywords as provided in 3av_0809_hajduczenia_1.pdf.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Include Project Objectives (see comment 2171)
Abstract: This amendment to IEEE Std 802.3-2008 provides physical layer specifications and management parameters for symmetric and asymmetric operation at 10 Gb/s on point-to-multipoint passive optical networks (10G-EPON). As such, the 10G-EPON extends the network architecture of P802.3ah 1G-EPON, providing support for both symmetric and asymmetric data rates while maintaining complete backward compatibility with 1G-EPON equipment already deployed.

[Editor to add objectives here]

Keywords: 1 Gb/s Ethernet Passive Optical Networks (1G-EPON), 10 Gb/s Ethernet Passive Optical Networks (10G-EPON), PON, Point to Multipoint (P2MP), Physical Medium Dependent (PMD), Multi-Point MAC Control (MPMC), Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS), Physical Media Attachment (PMA), Forward Error Correction (FEC)

---

*Cl* **00** *SC* **00** *P* *L* # 1631

Anslow, Peter Nortel Networks

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

Throughout this draft there are many places where the readibility can be improved by small editorial modifications that do not change the meaning. The attached PDF file contains suggested changes indicated using the "Text Edits" tool. Because the editing marks can be difficult to locate, each one has an associated word in the text marked with yellow highlighter. These are generally after the text edit, except where this is near the end of the paragraph. Only pages with proposed edits are included.

*SuggestedRemedy*

Apply these suggested changes.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
As per 3av_0809_anslow_1.pdf with editorial license.

*Cl* **00** *SC* **00** *P* **19** *L* **13** # 1570

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *joint xref*

In many places in the draft, references have "@@" before and after them. These symbols are inappropriate in a WG draft and reduce the readability of the text. They need to be removed. The cross references that are external to the draft can be marked in some other much less intrusive way such as an alternate colour. This can still be searched for in FrameMaker.

*SuggestedRemedy*

Remove the many ocurrences of "@@" throught the draft. Show external cross references some other way.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Moved to C00, originally was against 31C]
Will consider reformating linked text at some time in the future.
See comment #2346

*Cl* **00** *SC* **00** *P* **202** *L* **51** # 1999

Brown, Alan Wave7 Optics, Inc.

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

The readability of many tables in this document could benefit by consistent formatting. This table, as an example, is missing the darker solid outline at its bottom, which may cause confusion for the reader thinking that the table at the top of the next page is a continuation (until comparing the two table titles).

*SuggestedRemedy*

Add darker solid outline consistently for all tables.

*Response* *Response Status* **C**

ACCEPT.
[Moved to C00, originally against C77/77.3.6.12]

*Cl* **00** *SC* **00** *P* **58** *L* **41** # 2016

Frazier, Howard Broadcom

*Comment Type* **ER** *Comment Status* **A** *E PROCESSED], reword joint*

I believe that we follow the convention of saying "in this clause", rather than "in Clause XX" when we are making a reference to the entire clause from within that clause.

*SuggestedRemedy*

correct as per comment. Also on line 50.

*Response* *Response Status* **C**

ACCEPT.
[Moved to C00]

*Cl* **00** *SC* **00** *P* **60** *L* **1** # 1766

KIMURA, Mitsunobu Hitachi Communicatio

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

The title of the Subclause has a period("."). Also titles of Subclause 75.5 and 75.6 have periods.

*SuggestedRemedy*

Every title of Subclause should not have a period.

*Response* *Response Status* **C**

ACCEPT.
[Moved to C00]
[Subclause number was fixed]
Make sure the titles of subclauses do not have 'period' at the end.

*Cl* **00** *SC* **00** *P* **60** *L* **3** # 2017

Frazier, Howard Broadcom

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

The word "Subclause" should never appear in a cross-reference to a subclause, regardless of whether the cross-reference is to a subclause within the current clause, or to a subclause of another clause.

*SuggestedRemedy*

Please delete the word "Subclause" from all cross-references.

*Response* *Response Status* **C**

ACCEPT.
[Moved to C00]

*Cl* **00** *SC* **1.4.95** *P* **12** *L* **29** # 1908

Dawe, Piers Avago

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

"Subclause 75.8.1"

*SuggestedRemedy*

In general, delete every "Subclause". In 1.4 Definitions only, use the format "(See IEEE 802.3, Clause n.)"

*Response* *Response Status* **C**

ACCEPT.
Moved from c01 to c00

*Cl* **00** *SC* **56.1** *P* **35** *L* **2** # 1982

Dawe, Piers Avago

*Comment Type* **ER** *Comment Status* **R** *[TO BE PROCESSED], joint*

Lots of SHOUTY ALL-CAPITALS! Style guide says a standard should have consistent figures: ALL CAPS or not. The overwhelming majority of 802.3 figures use mixed upper and lower case, as does ISO/IEC 7498-1. I have looked for a reason why a layer diagram should be different and found none - only a hypothesis that the original one was done a very long time ago and has been copied and copied while the document style and the style guide have evolved. There are good reasons for leaving old material alone (time, risk of corruption) but that doesn't apply to diagrams introduced or changed in an active project.

*SuggestedRemedy*

Change Fig 56-2, 76-6, 76-8, 31C-1 and all similar figures to mixed upper and lower case. In layer diagrams, consider underlining "OSI Reference Model layers" and "LAN CSMA/CD layers" to distinguish these headings from the layers they refer to.

*Response* *Response Status* **C**

REJECT.
[Moved to C00]
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **00** *SC* **76.2.2.1** *P* **108** *L* **36** # 1942

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *CESSED], Capitalization, joint*

Process and character names aren't ALL CAPS, although states are, and processes and functions can be treated as proper nouns. Not sure if base document is consistent about idle (or Idle) characters (or control characters). Missing "to".

*SuggestedRemedy*

76.2.2.1 Alignment and Idle control character deletion The Idle Deletion process is responsible for deleting excess Idle characters to allow the parity data to be inserted

*Response* *Response Status* **C**

ACCEPT.
Moved to c00
Change "IDLE DELETION" to "Idle Deletion"
Change "IDLE" to "Idle"

*Cl* **01** *SC* **1.3** *P* **13** *L* **11** # 1909

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

Watch out for clashes with 802.3ba

*SuggestedRemedy*

Make sure that we have names to distinguish the low overhead R FEC (perhaps call that K-FEC or KR FEC?) from the strong Reed-Solomon FEC (perhaps call that P-FEC or PR FEC?). Check register numbers don't clash

*Response* *Response Status* **C**

REJECT.
802.3ba will be advised on register numbers used in our draft.

Vote to accept proposed response
For: 23
Against: 0
Abstain: 5

*Cl* **01** *SC* **1.4** *P* **12** *L* **15** # 2102

Kramer, Glen Teknovus, Inc.

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

Labels repeated twice:

line 15 - 10GBASE-PR:10GBASE-PR:
line 20 - 10/1GBASE-PRX:10/1GBASE-PRX:

*SuggestedRemedy*

Remove one lable on each line

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **15** # 1674

Jessica, Jiang Salira

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

Duplicate word " 10GBASE-PR:"

*SuggestedRemedy*

Remove the additinal word

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **15** # 1816

D'Ambrosia, John Force10 Networks

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

"10GBASE-PR" is repeated twice

*SuggestedRemedy*

delete redundant "10GBASE-PR"
and bold text

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **15** # 1665

Marris, Arthur Cadence

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

Duplicate definition names 10GBASE-PR:10GBASE-PR and 10/1GBASE-PRX:10/1GBASE-PRX

*SuggestedRemedy*

Delete one of them.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **15** # 2263

Hajduczenia, Marek Nokia Siemens Networ

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

PMD definition is doubled for 10GBASE-PR. The same is true for 10/1GBASE-PRX in line 20. Remove the double PMD definitions from line 15 and 20

*SuggestedRemedy*

Replace line 15 with "10GBASE-PR: IEEE 802.3 Physical Layer specification for a 10 Gb/s symmetric point-to-"
Replace line 20 with "10/1GBASE-PRX: IEEE 802.3 Physical Layer specification for a 10 Gb/s downstream, 1"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **20** # 1817

D'Ambrosia, John Force10 Networks

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

10/1GBASE-PRX is repeated twice.

*SuggestedRemedy*

delete extra 10/1GBASE-PRX. Bold remaining text

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **20** # 1675

Jessica, Jiang Salira

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

Duplicate word "10/1GBASE-PRX:"

*SuggestedRemedy*

Remove the duplicate word

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4** *P* **12** *L* **30** # 1907

Dawe, Piers Avago

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

Possible confusion between time-quantum and pause_quantum

*SuggestedRemedy*

add definitions for both

*Response* *Response Status* **C**

ACCEPT.

*Cl* **01** *SC* **1.4.95** *P* **12** *L* **28** # 1632

Anslow, Peter Nortel Networks

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

clause 1.4.95 has changed to:
"As used in IEEE 802.3 Clause 38. Clause 52, Clause 53, Clause 58, Clause 59, Clause 60, Clause 68 and Clause 75 for fiber optic links, the static loss of light through a link between a transmitter and receiver. It includes the loss of the fiber, connectors, and splices and optional power splitter/combiner (for details, see @@Subclause 75.8.1@@)"
1) Clause 75.8.1 does not exist.
2) The optional splitter/combiner is only applicable to clauses 60 and 75
3) Listing all of the optical clauses forces all future optical amendments to modify this clause
3) clause 75.9.1 (presumably the intended reference) contains:
"Insertion loss for SMF fiber optic cabling (channel) is defined at 1270, 1310, 1577 or 1590 nm, depending on the particular PMD. A suitable test method is described in ITU-T G.650.1."
This is not suitable as a generic reference for insertion loss.

*SuggestedRemedy*

Change clause 1.4.95 to:
"As used in IEEE 802.3 for fiber optic links, the static loss of light through a link between a transmitter and receiver. It includes the loss of the fiber, connectors, and splices and for Clause 60 and Clause 75 the optional power splitter/combiner."

*Response* *Response Status* **C**

ACCEPT.
Moved to clause 01.

*Cl* **01** *SC* **76.1.3.2** *P* **100** *L* **40** # 2374

Law, David 3Com

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

The abbreviation TQ is used here and in two PICS entries, and is not defined anywhere.

*SuggestedRemedy*

Either define in list of abbreviations of expand out to be time_quantum as used elsewhere.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c01
Add to abbreviations and only use TQ in PICS. (see comment 1939)

*Cl* **01** *SC* **76.1.6.2.2** *P* **104** *L* **24** # 2375

Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*

The abbreviation SLD is used but not defined in this draft or in subclause 1.5.

*SuggestedRemedy*

Define SLD in this draft, suggest in subclause 76.1.6.2.3.1, or add to subclause 1.5.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c01
Add to abreviations
SLD Start of LLID Delimiter

*Cl* **30** *SC* **30.11** *P* **16** *L* **1** # 1914

Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*

Time-wasting blank pages: this document insists on starting new clauses on even numbered pages, as if we were going to receive a printed copy eventually. 802.3ay doesn't.

*SuggestedRemedy*

Start each clause on the next available page. Format > Page Layout > Pagination > Delete Empty Pages

*Response* *Response Status* **C**

REJECT.
Style manual requires clauses to start on odd pages.

*Cl* **30** *SC* **30.2** *P* **14** *L* **13** # 2252

Ganga, Ilango Intel

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

Missing cross references throughout this clause. Add cross references.

Page 14, line 23 Why is 30.4 listed here withough any changes? Add changes if appropriate

Page 14, line 31 Editing instruction not very clear. Possible remedy "Insert the following after ..."

Page 15, line 16-30 if appropriate update subclauses 30.6 to 30.11. Are these placeholders without any text.

*SuggestedRemedy*

As per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
(1) Missing cross references throughout this clause. Add cross references. > Make all hyperlinks live and mark external links appropriately.
(2) Page 14, line 23 Why is 30.4 listed here withough any changes? Add changes if appropriate > Remove, no changes were made
(3) Page 15, line 16-30 if appropriate update subclauses 30.6 to 30.11. Are these placeholders without any text. > Remove, no changes were made
(4) Page 14, line 31 Editing instruction not very clear. Possible remedy "Insert the following after ..." > Delete lines 32, 33 on page 14, change editing instructions to read: "add at the end of the list in aMAUType"

*Cl* **30** *SC* **30.3.2.1.2** *P* **14** *L* **14** # 2265

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *Incorrect PMD names*

10/1GBASE-PR is not a correct PMD name - 10GBASE-PR is. Lines 14 and 20 are affected with the same problem.

*SuggestedRemedy*

Change "10/1GBASE-PR" to "10GBASE-PR" in line 14 and 20

*Response* *Response Status* **C**

ACCEPT.

*Cl* **30** *SC* **30.3.2.1.2** *P* **14** *L* **14** # 1688

Joergensen, Thomas Vitesse Semiconducto

*Comment Type* **E** *Comment Status* **A** *Incorrect PMD names*

There is nothing like 10/1GBASE-PR

*SuggestedRemedy*

Replace 10/1GBASE-PR with 10GBASE-PR

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]
See comment #2266

*Cl* **30** *SC* **30.3.2.1.2** *P* **14** *L* **14** # 2266

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Reference to 10GBASE-PR PCS is not precise enough. Lines 14 and 20 are affected. Since 10/1GBASE-PRX is referenced to 76.2.1.1, 10GBASE-PR should reference to 76.2.1.2.

*SuggestedRemedy*

Change "Clause 76" to "Subclause 76.2.1.2" in line 14 and line 20 on page 14.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "Clause 76" to "76.2.1.2" in line 14 and line 20 on page 14.

*Cl* **30** *SC* **30.3.2.1.2** *P* **14** *L* **14** # 1676

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *Incorrect PMD names*

sysmmetric 10G Phy type should be "10GBASE-PR"

*SuggestedRemedy*

change "10/1GBASE-PR" to "10GBASE-PR"

*Response* *Response Status* **C**

ACCEPT.
See comment #2266

*Cl* **30** *SC* **30.3.2.1.2** *P* **14** *L* **20** # 1677

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *Incorrect PMD names*

sysmmetric 10G Phy type should be "10GBASE-PR"

*SuggestedRemedy*

change "10/1GBASE-PR" to "10GBASE-PR"

*Response* *Response Status* **C**

ACCEPT.
See comment #2266

*Cl* **30** *SC* **30.3.2.1.3** *P* **14** *L* **20** # 1689

Joergensen, Thomas Vitesse Semiconducto

*Comment Type* **E** *Comment Status* **A** *Incorrect PMD names*

There is nothing names 10/1GBASE-PR

*SuggestedRemedy*

Replace 10/1GBASE-PR with 10GBASE-PR

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]
See comment #2266

*Cl* **30** *SC* **30.3.5** *P* **325** *L* **46** # 1910

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

There are several MPCP managed object definitions that refer to 65.1 (allegedly 65.1.2.3.2), including 1000 Mb/s counters (but see 30.2.1: maximum counter speed will scale by 10 by default, which may be OK)

*SuggestedRemedy*

Modify them as appropriate to refer to 76.1 also

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Page number was added per 802.3ayD2.2, section 2, page 325]

(1) Comment references to C30 / 30.3.5 in 802.3ayD2.2 (to be confirmed with the commenter).
(2) MPCP managed object definitions included in 30.3.5 are applicable to 10G-EPON. List of changes
- 30.3.5.1.2 aMPCPAdminState: Clause 64 > Clause 64 and Clause 77
- 30.3.5.1.3 aMPCPMode: Clause 64 > Clause 64 and Clause 77
- 30.3.5.1.4 aMPCPLinkID: 65.1.2.3.2 > 65.1.3.2.2 (correct link) or 76.1.6.2.3.2

*Cl* **30** *SC* **30.3.5.1.4** *P* **326** *L* **41** # 1911

Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Text says "as specified in 65.1.2.3.2;". There is no 65.1.2.3.2.

*SuggestedRemedy*

Please advise what it should be. If it's too late to be fixed in P802.3ay, please fix in .3av.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Page number was added per 802.3ayD2.2, section 2, page 325]
See comment #1910.

*Cl* **30** *SC* **30.3.7** *P* **246** *L* **15** # 1912

Dawe, Piers Avago

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

There are several OMPEmulation managed object definitions that refer to 65.1.3.

*SuggestedRemedy*

Modify them as appropriate to refer to 76.1.6.2 also

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Page number was added per 802.3ayD2.2, section 2, page 325]
See comment #1910.

List of changes:
(1) 30.3.7.1.2aOMPEmulationType - change "65.1.3.1" to "65.1.3.1 and 76.1.6.2.1, where applicable"
(2) 30.3.7.1.3aSLDErrors - change "65.1.3.3.1" to "65.1.3.3.1 and 76.1.6.2.3.1, where appropriate"
(3) 30.3.7.1.4aCRC8Errors, 30.3.7.1.5aGoodLLID - change "65.1.3.3.1" to "65.1.3.3.1 and 76.1.6.2.3.1, where appropriate", change "65.1.3.3.3" to "65.1.3.3.3 and 76.1.6.2.3.3, where appropriate"
(4) 30.3.7.1.6aONUPONcastLLID, 30.3.7.1.7aOLTPONcastLLID, 30.3.7.1.8aBadLLID - change "65.1.3.3.1" to "65.1.3.3.1 and 76.1.6.2.3.1, where appropriate", change "65.1.3.3.2" to "65.1.3.3.2 and 76.1.6.2.3.2, where appropriate", change "65.1.3.3.3" to "65.1.3.3.3 and 76.1.6.2.3.3, where appropriate"

*Cl* **30** *SC* **30.5** *P* **14** *L* **26** # 1913

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

This heading "30.5 Layer management for 10 Mb/s, 100 Mb/s, 1000 Mb/s and 10 Gb/s medium attachment units (MAUs)" is not as in 802.3-2005_REV_D2p3

*SuggestedRemedy*

Change to "30.5 Layer management for medium attachment units (MAUs)", scrub the document for any other changes.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **30** *SC* **30.5.1.1.15** *P* **15** *L* **13** # 1679

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *10/1GBASE-PRX-U*

Should use "10/1GBASE-PRX-U" PHY

*SuggestedRemedy*

change "10GBASE-PRX-U" to "10/1GBASE-PRX-U"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **30** *SC* **30.5.1.1.15** *P* **15** *L* **7** # 1678

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *10/1GBASE-PRX-U*

Should use "10/1GBASE-PRX-U" PHY

*SuggestedRemedy*

change "10GBASE-PRX-U" to "10/1GBASE-PRX-U"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **30** *SC* **30.5.1.1.15** *P* **15** *L* **7** # 2267

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *10/1GBASE-PRX-U*

Incorrect PMD name. 10GBASE-PRX does not exist. The same problem exists in line 13, page 15, subclause 30.5.1.1.16

*SuggestedRemedy*

Change "10GBASE-PRX" to "10/1GBASE-PRX" in line 7. The same problem exists in line 13, page 15, subclause 30.5.1.1.16.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **30** *SC* **30.5.1.1.15** *P* **15** *L* **8** # 2258

Ganga, Ilango Intel

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

These FEC corrected blocks counter and FEC uncorrected blocks counter is newly defined for PR (.3av, 45.2.1.90). Provide reference to appropriate subclause in 45 where this attribute maps to. Currently these attribute maps to FEC counters in backplane and PX.

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

(1) in 3av_0809_mandin_5.pdf:
(a) change the title of Table 45-112 and Table 45-113 to read "10GBASE-PR and 10/1GBASE-PRX (…)" …
(b) title of 45.2.3.32 to read "10GBASE-PR and 10/1GBASE-PRX corrected FEC codewords counter (Register 3.77, 3.78)"
(c) title of 45.2.3.33 to read "10GBASE-PR and 10/1GBASE-PRX uncorrected FEC codewords counter (Register 3.79, 3.80)"

(2) Alter description of 30.5.1.1.15 aFECCorrectedBlocks as follows:

30.5.1.1.15 aFECCorrectedBlocks
(.)
BEHAVIOUR DEFINED AS:
For 1000BASE-PX, 10GBASE-R, 10GBASE-PR or 10/1GBASE-PRX PHYs, a count of corrected FEC blocks. This counter will not increment for other PHY types.
Increment the counter by one for each received block that is corrected by the FEC function in the PHY.
If a Clause 45 MDIO Interface to the PCS is present, then this attribute will map to the FEC corrected blocks counter (see 45.2.7.5 and 45.2.1.86 for 10GBASE-R, 45.2.3.32 for 10GBASE-PR and 10/1GBASE-PRX).;

(3) Alter description of 30.5.1.1.16 aFECUncorrectableBlocks as follows:
(.)
BEHAVIOUR DEFINED AS:
For 1000BASE-PX, 10GBASE-R, 10GBASE-PR or 10/1GBASE-PRX PHYs, a count of uncorrectable FEC blocks. This counter will not increment for other PHY types.
Increment the counter by one for each FEC block that is determined to be uncorrectable by the FEC function in the PHY.
If a Clause 45 MDIO Interface to the PCS is present, then this attribute will map to the FEC uncorrectable blocks counter (see 45.2.7.6 and 45.2.1.87 for 10GBASE-R, 45.2.3.33 for 10GBASE-PR and 10/1GBASE-PRX).;

[Make sure all links are live!]

*Cl* **30** *SC* **30.5.1.1.16** *P* **15** *L* **10** # 2161

Barrass, Hugh Cisco

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

The name of the object does not match the register

"uncorrectable" vs "uncorrected"

*SuggestedRemedy*

Change the object name from "aFECUncorrectableBlocks" to "aFECUncorrectedBlocks"

Also change in the text.

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **30** *SC* **30.5.1.1.16** *P* **15** *L* **13** # 1569

Anslow, Peter Nortel Networks

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

This says "For 1000BASE-PX, 10GBASE-R PHYs, 10GBASE-PR, or 10GBASE-PRX-U PHYs, a count of uncorrectable FEC blocks." which contains a spurious comma and "PHYs"

*SuggestedRemedy*

Change to "For 1000BASE-PX, 10GBASE-R, 10GBASE-PR or 10GBASE-PRX-U PHYs, a count of uncorrectable FEC blocks." by deleting the comma and "PHYs"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **30** *SC* **30.5.1.1.2** *P* **14** *L* **34** # 2411

Mandin, Jeff PMC Sierra

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

The description text for the management parameter PMD types is precisely the same for the -D types as it is for the -U types.

*SuggestedRemedy*

Add the words "tx" and "rx" after "downstream" and "upstream" as appropriate for each of the PMD types

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

Not really sure what is meant by "as appropriate" in this case. An example from the commenter would be most welcome.

*Cl* **31A** *SC* **31A** *P* **17** *L* **1** # 1918

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *Ξ PROCESSED], PAR scope*

This proposed new "Organization Specific Extension" MAC Control capability appears to fail two of the five criteria: "Compatible managed object definitions" - it seems to be intended to enable a non-compatible management and/or OAM transport method, and similarly "One unique solution per problem (not two solutions to a problem)": it seems intended to enable a management method in competition with Clause 30 and maybe Clause 57. While this may or may not be a good thing to do, trying to slip it through inside a draft about something else, in a system in which the only meaningful yes/no decision is before this stage in P802.3av's progress, is not acceptable. Needs to be properly debated in 802.3 and go to the 802 exec. No voter can use the same criterion... as above. Also the MAC Control material in the draft is very incomplete.

*SuggestedRemedy*

Remove the material related to MAC Control EXTENSION to a separate draft. Prepare separate five criteria responses for it, asking for exemptions if appropriate.

*Response* *Response Status* **C**

REJECT.
802.3 considered it and chartered 802.3av TF to implement it as "a service to humanity". This mechanism was added by directive of the 802.3 WG - please see motion number #3 in minutes_0708.pdf.

*Cl* **31A** *SC* **31A** *P* **17** *L* **1** # 1919

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *Ξ PROCESSED], PAR scope*

The proposed 31A and 31C have nothing to do with the objectives

*SuggestedRemedy*

Remove the material related to MAC Control EXTENSION to a separate draft. Prepare objective(s) for it, or decide to abandon it, or let 802.3 or another study group or task force address the question.

*Response* *Response Status* **U**

REJECT.
802.3 considered it and chartered 802.3av TF to implement it as "a service to humanity". This mechanism was added by directive of the 802.3 WG - please see motion number #3 in minutes_0708.pdf.

*Cl* **31A** *SC* **31A** *P* **17** *L* **1** # 1917

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *E PROCESSED], PAR scope*

This proposed new "Organization Specific Extension" MAC Control capability is outside the PAR. As written, it is not contained to EPON/10G-EPON. It appears to be allowing a way of management that's in contradiction to Clause 30 and possibly Clauses 45 and 57. I don't know what the security implications of opening up another communication channel like this are. This channel seems to be available to just anyone with an OUI for absolutely any purpose: is that what we want? Is there a similar issue of phone-company management practices in WiFi or WiMax, and is this approach consistent? Needs to go to the 802 exec. No voter can use the same criterion for deciding to vote for or against this as he would in deciding to vote for or against the in-scope (10G, 10/1G) material - it's a completely different topic which needs a different ballot, hence different draft. Also the MAC Control material in the draft is very incomplete.

*SuggestedRemedy*

Remove the material related to MAC Control EXTENSION to a separate draft. Prepare a PAR for it.

*Response* *Response Status* **C**

REJECT.
802.3 considered it and chartered 802.3av TF to implement it as "a service to humanity".
This mechanism was added by directive of the 802.3 WG - please see motion number #3 in minutes_0708.pdf.

*Cl* **31A** *SC* **31A** *P* **17** *L* **1** # 1920

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

Why are we introducing another management signalling method in MAC Control? Isn't Clause 57 provided for management signalling?

*SuggestedRemedy*

Decide whether this alternative management signalling method should go in 31 and annexes or 57, reply to comment with the reason.

*Response* *Response Status* **C**

REJECT.
This mechanism was added by directive of the 802.3 WG - please see motion number #3 in minutes_0708.pdf.
Additionally, please note that Clause 57 defines "the Operations, Administration, and Maintenance (OAM) sublayer, which provides mechanisms useful for monitoring link operation such as remote fault indication and remote loopback control. In general, OAM provides network operators the ability to monitor the health of the network and quickly determine the location of failing links or fault conditions. The OAM described in this clause provides data link layer mechanisms that complement applications that may reside in higher layers."
As such, Clause 57 mechanisms are limited to slow protocol implementation "(OAM information is conveyed in Slow Protocol frames (see Annex 57A) called OAM Protocol Data Units (OAMPDUs)." which could severly extend the startup time for any 10G-EPON implementation not making use of the Annex 31C like MAC Control frames. The purpose of Annex 31C mechanism is to allow for unrestricted exchange of MAC Control information between the MACC entities.

*Cl* **31A** *SC* **31A** *P* **17** *L* **11** # 1922

Dawe, Piers Avago

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

Bad English and flat wrong: this reserved range does not run through FF-FD because the next possible address is not in the range, as stated in the next row. It stops at FF-FD.

*SuggestedRemedy*

Change "00-07 through FF-FD" to "00-07 to FF-FD"

*Response* *Response Status* **C**

ACCEPT.
We are not going to enter into discussions of "to" and "through" (again) :)

*Cl* **31A** *SC* **31A** *P* **17** *L* **13** # 2249

Ganga, Ilango Intel

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

Provide reference to appropriate clause in third column of table 31-A1

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Reference to "Annex 31C" needs to be inserted in third column.

*Cl* **31A** *SC* **31A** *P* **17** *L* **26** # 1633

Anslow, Peter Nortel Networks

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

The first row of the table contains "EXTENTSION (opcode 0xFFFE)". Extension is spelt incorrectly.

*SuggestedRemedy*

change to "EXTENSION (opcode 0xFFFE)"

*Response* *Response Status* **C**

ACCEPT.
[Moved to C31A]

*Cl* **31A** *SC* **31A** *P* **17** *L* **30** # 1923

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

"Organizationally-Unique Identifier that determines the format and semantics of the Value field and its subfields, if any are defined.": this seems far too open-ended.

*SuggestedRemedy*

Either remove the OUI field and change from "Organization-Specific Extension" to something specific for ITU-T style management, or whatever is really wanted. Or restrict the possible OUIs to one, the ITU-T OUI. Restrict the scope as appropriate, e.g. to PON and DSL ports only.

*Response* *Response Status* **U**

REJECT.
802.3 considered it and chartered 802.3av TF to implement it as "a service to humanity". This mechanism was added by directive of the 802.3 WG - please see motion number #3 in minutes_0708.pdf.

*Cl* **31A** *SC* **31A** *P* **17** *L* **8** # 1921

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Most of the rest of the table needs modifying to refer to the new MPCP.

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT.
Introduce the following changes to Annex 31A:
(1) Change entries in column "Specified in" from "Clause 64" to "Clause 64 / Clause 77"
(2) Table 31A-3-GATE MAC Control indications needs to be extended, by adding a new row describing Discovery Options field (see 3av_0809_hajduczenia_9.pdf)
(3) Table 31A-5-REGISTER_REQ MAC Control indications needs to be extended, by adding a new row describing Discovery Options field, laser on and laser off times (see 3av_0809_hajduczenia_9.pdf)
(4) Table 31A-6-REGISTER MAC Control indications needs to be extended, by adding a new row describing laser on and laser off times (see 3av_0809_hajduczenia_9.pdf)

*Cl* **31A** *SC* **31A.1** *P* **17** *L* **12** # 1915

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

31.1 Overview says "Non-realtime, or quasistatic control (e.g., configuration of MAC operational parameters) is provided by Layer Management." The new 31A and 31C appears to be an attempt to overturn that, and not restricted to PON.

*SuggestedRemedy*

Needs proper debate in 802.3. If we agree that we want to do go ahead, the sentence quoted would need changing.

*Response* *Response Status* **U**

REJECT.
[Subclause number was fixed]
[Page number was fixed]
Annex 31A and 31C are not an attempt to overturn that "Non-realtime, or quasistatic control". It will be used for real-time control.

*Cl* **31A** *SC* **31A.6** *P* *L* **42** # 1916

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

If MAC Control is to be used for disparate purposes, with different ports implementing different functions, we could do with a PICS so that the implementer can declare which he supports and doesn't support.

*SuggestedRemedy*

Add text and a PICS with an option for each MAC Control function: PAUSE, Clause 64 MPCP, Clause 77 MPCP (And in its own draft, if it doesn't go into Clause 57, "EXTENSION")

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Page number was fixed]

PICS will be added to Annex 31C. All other functions already have PICS in corresponding clauses, that are referred to from Annex 31A.

*Cl* **31C** *SC* **31C** *P* **19** *L* **1** # 1924

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

If you create a new MAC Control category you need to...

*SuggestedRemedy*

Create a new managed object on 30.2 (including Figure 30-3), counters and material in Table 30-1 and (I think) a new 30.12

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add new managed object oEXTENSION with the following definition:
"If implemented, oEXTENSION is contained within oMACControlEntity. The oEXTENSION managed object class provides the management controls necessary to allow an instance of the MAC Control function to be managed."

Create a new subclause 30.3.8 with the following contents
30.3.8 EXTENSION entity managed object class
This subclause formally defines the behaviours for the oEXTENSION managed object class attributes.
30.3.8.1 aEXTENSIONMACCtrlFramesTransmitted
ATTRIBUTE
APPROPRIATE SYNTAX:
Generalized nonresetable counter. This counter has a maximum increment rate of 1 600 000 counts per second at 1000 Mb/s
BEHAVIOUR DEFINED AS:
A count of EXTENSION frames passed to the MAC sublayer for transmission. This counter is incremented when a MA_CONTROL.request primitive is generated within the MAC Control sublayer with an opcode indicating the EXTENSION operation.;
30.3.8.2 aEXTENSIONMACCtrlFramesReceived
ATTRIBUTE
APPROPRIATE SYNTAX:
Generalized nonresetable counter. This counter has a maximum increment rate of 1 600 000 counts per second at 1000 Mb/s
BEHAVIOUR DEFINED AS:
A count of MAC Control frames passed by the MAC sublayer to the MAC Control sublayer. This counter is incremented when a ReceiveFrame function call returns a valid frame with: (1) a lengthOrType field value equal to the reserved Type for 802.3_MAC_Control as specified in 31.4.1.3, and (2) an opcode indicating the EXTENSION operation.;

Update Figure 30-3 adding a new box next to oMPCP with the following contents:
oEXTENSION
30.3.8
Connect it to oMACControlEntity.

Update Table 30-1c with a new entry below oMACControlFunctionEntity block:
oEXTENSION managed object class (30.3.8)
row 1: aEXTENSIONMACCtrlFramesTransmitted | ATTRIBUTE | GET | <empty column> | <empty column> | X

row 2: aEXTENSIONMACCtrlFramesReceived | ATTRIBUTE | GET | <empty column> | <empty column> | X

---

*Cl* **31C** *SC* **31C.2** *P* **19** *L* **29** # 2170

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The methods for assigning, adminstering, and policing organizationally unique identifiers are not described in the draft -- if they are already stipulated, can a reference be provided? Perhaps they are described in pre-existing text (same methods used to administer MAC identifiers)?

*SuggestedRemedy*

provide reference to mechanism for administering organizationally unique identifiers if it is defined, or define one if it has not been provided already.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "E" to "T"]
[Page number added]
[Subclause number was fixed]

Add a foonote in Annex 31C, page 19, point d), after OUI with the contents "Details defining the format of OUIs can be found in IEEE Std 802-2001 Clause 9. Interested applicants should contact the IEEE Standards Department, Institute of Electrical and Electronics Engineers, http://standards.ieee.org/regauth/index.html, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA."

---

*Cl* **31C** *SC* **31C.3.1** *P* **20** *L* **19** # 1925

Dawe, Piers Avago

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

Font too small

*SuggestedRemedy*

Change 7 point to 8 point wherever practical

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Font 7 is used already. 8 can be used in the next release.

---

*Cl* **45** *SC* **2.1** *P* **22** *L* **16** # 2160

Barrass, Hugh Cisco

*Comment Type* **T** *Comment Status* **A** *ROCESSED], FEC registers*

Table 45-3

FEC registers not in the table.

*SuggestedRemedy*

Add register for FEC control/status.

1.310 10GBASE-PR FEC ability
1.311 10GBASE-PR FEC control register
1.312, 1.313 10GBASE-PR FEC corrected blocks counter
1.314, 1.315 10GBASE-PR FEC uncorrected blocks counter

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Registers now appear in PCS section.
See resolution to comment #2272

---

*Cl* **45** *SC* **2.1.10.1** *P* **23** *L* **37** # 1761

KIMURA, Mitsunobu Hitachi Communicatio

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

"bit 1.1.9 indicates" should be "bit 1.11.9 indicates".

*SuggestedRemedy*

"bit 1.11.9 indicates"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **45** *SC* **2.1.88** *P* **27** *L* **45** # 2159

Barrass, Hugh Cisco

*Comment Type* **T** *Comment Status* **A** *OCESSED], BA compatibility*

The register number assigned is entirely arbitrary, however 802.3ba is adding 80 registers to the backplane FEC & startup areas. It would be much simpler for 802.3ba if these registers could be placed contiguously therefore 802.3av should use a higher register allocation.

*SuggestedRemedy*

Change register 1.176 (& others) to 1.310 (and above).

Change subclause numbers appropriately.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Registers are now moved to PCS MMD, so no there is no conflict

*Cl* **45** *SC* **2.1.88** *P* **27** *L* **46** # 2163

Barrass, Hugh Cisco

*Comment Type* **T** *Comment Status* **R** *PROCESSED], FEC registers*

There is already a register that contains the FEC ability, there is no reason why backplane FEC ability & PR FEC ability can't be in the same register.

The different FECs can be identified by specific bits in the register.

*SuggestedRemedy*

Delete the new register & subclause.

Make change instructions to add the bits to register 1.170.

Similar changes for the control register (delete 1.177, change existing register 1.171)

*Response* *Response Status* **C**

REJECT.
10GEPON FEC is part of the PCS rather than a separate sublayer so the registers belong in a different MMD/subclause

*Cl* **45** *SC* **2.1.88** *P* **28** *L* **14** # 1691

Joergensen, Thomas Vitesse Semiconducto

*Comment Type* **T** *Comment Status* **R** *PROCESSED], FEC registers*

I don't se the reason to have the 10GBASE-PR FEC ability bit, as it always must be one.

*SuggestedRemedy*

Change register bit 1.176.0 to "Reserved"

*Response* *Response Status* **C**

REJECT.
This has been discussed previously and it was decided to retain the bit that is always '1' for consistency with other FEC management specifications.
See resolution to comment #2272

*Cl* **45** *SC* **2.1.90** *P* **29** *L* **1** # 2162

Barrass, Hugh Cisco

*Comment Type* **T** *Comment Status* **R** *PROCESSED], FEC registers*

As far as I can see, this register is identical to the one used to show the 10GBASE-KR (& soon the HSE) FEC counts. Is there any reason to define a new & different register for the same function. It also seems that the two registers share the same MIB object, so it's hard to justify separate registers.

*SuggestedRemedy*

Delete registers 178 - 181.

*Response* *Response Status* **C**

REJECT.
10G-EPON FEC is part of the PCS rather than a separate sublayer so the registers belong in a different MMD/subclause.
See resolution to comment #2272

*Cl* **45** *SC* **45** *P* **22** *L* # 1926

Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*

Consider that 802.3ba will probably have to define additional PMA registers, perhaps by creating additional MMDs for separated PMA and PMD, and/or stacked PMAs

*SuggestedRemedy*

If it is clear what is going to happen you may wish to do the same

*Response* *Response Status* **C**

REJECT.
No text was supplied and the current register scheme is not broken.

*Cl* **45** *SC* **45** *P* **27** *L* # 1976

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *PROCESSED], FEC registers*

You have put the FEC inside the PCS yet in Clause 45 it is controlled by PMA/PMD registers

*SuggestedRemedy*

Put the FEC registers in the PCS area (3.n), or perhaps in its own MMD

*Response* *Response Status* **C**

ACCEPT.
See resolution to comment #2272

*Cl* **45** *SC* **45.2.1** *P* **22** *L* **20** # 1974

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *FEC registers*

You have omitted the strong FEC register from the table: per clause 76 they should not be 1.n registers

*SuggestedRemedy*

Add entries for FEC registers in 45.2.3 PCS registers Table 45-82, or perhaps in a FEC MMD. Avoid register/bit clashes with P802.3ba.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2272

*Cl* **45** *SC* **45.2.1** *P* **29** *L* **54** # 2272

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *PROCESSED], FEC registers*

Subclause 45.2.1 is missing FEC functionality description for 10/1GBASE-PRX PMDs, which are essentially asymmetric and use 1 Gb/s link, where FEC is not mandatory. A list of changes is provided in 3av_0809_hajduczenia_2.pdf.

Special thanks to all people participating in the revision of the document:
@@@

*SuggestedRemedy*

Add Subclauses 45.2.1.92 through 45.2.1.95 as presented in 3av_0809_hajduczenia_2.pdf.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
PRX registers should be merged with PR and the whole thing moved to 45.2.3. Complete text in 3av_0809_mandin_5.pdf

Straw poll
I prefer
1) 1 bit for PR, 1 bit for PRX: 0
2) 1 bit for Tx (FEC encode), 1 bit for Rx (FEC decode): 0
3) 1 bit for PR/PRX: 6
4) Abstain: 15

Add to c76:
"76.2.3.3.5 Error monitoring capability
The following counters apply to FEC sublayer management and error monitoring. If an MDIO interface is provided (see Clause 45), it is accessed via that interface. If not, it is recommended that an equivalent access be provided. These counters are reset to zero upon read or upon reset of the FEC sublayer. When a counter reaches all ones, it stops counting. The counters' purpose is to help monitor the quality of the link.

76.2.3.3.5.1 Corrected_FEC_codewords_counter
32-bit counter. FEC_corrected_codewords_counter counts once for each corrected FEC codewords in the decoding. This variable is provided by a management interface that may be mapped to the 45.2.3.32 register (3.77 and 3.78).

76.2.3.3.5.2 Uncorrected_FEC_codewords_counter
32-bit counter. FEC_uncorrected_codewords_counter counts once for each uncorrected FEC codewords in the decoding. This variable is provided by a management interface that may be mapped to the 45.2.3.33 register (3.79 and 3.80)."

*Cl* **45** *SC* **45.2.1.10.1** *P* **23** *L* **37** # 1634

Anslow, Peter Nortel Networks

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

The first sentence says "When read as a one, bit 1.1.9 indicates that the PMA/PMD has P2MP abilities listed in register 1.12." This should be "bit 1.11.9" not "bit 1.1.9"

*SuggestedRemedy*

Change to "When read as a one, bit 1.11.9 indicates that the PMA/PMD has P2MP abilities listed in register 1.12."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c45
See resolution to 1761

---

*Cl* **45** *SC* **45.2.1.11** *P* **25** *L* **33** # 1818

D'Ambrosia, John Force10 Networks

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

Table 45-12 is broken.

*SuggestedRemedy*

tie 45-12 on Page 25 to rest of table on p 26.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **45** *SC* **45.2.1.11.1** *P* **26** *L* **34** # 1636

Anslow, Peter Nortel Networks

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

The second sentence starts "When read as a one,". This should be "When read as a zero," This error is also present in subclauses 45.2.1.11.2 through 45.2.1.11.11

*SuggestedRemedy*

change the second sentence of subclauses 45.2.1.11.1 through 45.2.1.11.11 to start with "When read as a zero,"

*Response* *Response Status* **C**

ACCEPT.
Changed from "ER" to "TR"
Moved to c45

---

*Cl* **45** *SC* **45.2.1.11.1** *P* **26** *L* **34** # 1975

Dawe, Piers Avago

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

"10/ new-line 1GBASE-PRX-D1"

*SuggestedRemedy*

Either change to e.g. "10_1GBASE-PRX-D1" or use the Frame document option to stop line splits after /

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Will attempt to catch splits and fix.

---

*Cl* **45** *SC* **45.2.1.11.6** *P* **27** *L* **11** # 1637

Anslow, Peter Nortel Networks

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

clause 45.2.1.11.6 ends "not able to operate as a 10GBASE-PR-D PMA/PMD type." This should be "not able to operate as a 10GBASE-PR-D3 PMA/PMD type."

*SuggestedRemedy*

change clause 45.2.1.11.6 to end "not able to operate as a 10GBASE-PR-D3 PMA/PMD type."

*Response* *Response Status* **C**

ACCEPT.
Moved to c45

---

*Cl* **45** *SC* **45.2.1.4** *P* **23** *L* **12** # 1571

Anslow, Peter Nortel Networks

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

The new row in this table (45-6) relating to bit 1.4.7 should be shown with underline font because it is to be added.

*SuggestedRemedy*

Show additional row for bit 1.4.7 with underline font.

*Response* *Response Status* **C**

ACCEPT.
Moved to c45

*Cl* **45** *SC* **45.2.1.4** *P* **23** *L* **25** # 2268

Hajduczenia, Marek Nokia Siemens Networ

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

Line 27 is also affected.
"1Gb/s" is missing a space - change to "1 Gb/s"

*SuggestedRemedy*

"1Gb/s" is missing a space - change to "1 Gb/s". Change also in line 27

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **45** *SC* **45.2.1.6** *P* **24** *L* **5** # 1635

Anslow, Peter Nortel Networks

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

In the Bit(s) column of the second row of Table 45-7 "1.7.15:3" should be "1.7.15:5"

*SuggestedRemedy*

Change to "1.7.15:5"

*Response* *Response Status* **C**

ACCEPT.
Moved to c45
Was "ER" changed to "TR"

---

*Cl* **45** *SC* **45.2.1.6** *P* **24** *L* **8** # 1572

Anslow, Peter Nortel Networks

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

The added text "1 1 0 1 0 = 10GBASE-PR-U3" in Table 45-7 should be shown with an underline font.

*SuggestedRemedy*

Show "1 1 0 1 0 = 10GBASE-PR-U3" in underline font

*Response* *Response Status* **C**

ACCEPT.
Moved to c45

---

*Cl* **45** *SC* **45.2.1.88** *P* **28** *L* **14** # 1758

Hirth, Ryan Teknovus

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

FEC consumes approx. 33% of the MAC logic gates and consumes approximately 100mW of power. Not all links require FEC to achieve a BER of 10E-12. An option should be added to the 10GBase-PR FEC ability register Table 45-65 to disable the FEC in order to save power.

*SuggestedRemedy*

1.176.2 10GBASE-PR FEC transmit enable
This bit enables the 64/66 bit FEC encoder to insert parity. This bit is enabled by default, but may be disabled if the link BER is better that 10E-12 without FEC.
1.176.3 10GBASE-PR FEC receive enable
This bit enables the 64/66 bit FEC decoder to provide error correction. This bit is enabled by default, but may be disabled if the link BER is better that 10E-12 without FEC.

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

[Postponed till Thursday]
Implement after #2272

--- 18.09.2008 [3] ---

The TF will discuss this comment at the next meeting.

Vote
I approve this response.
For: 17
Against: 2
Abstain: 6

[Passes: Editorial instruction: include this comment in the DB D2.1]

--- 18.09.2008 [2] ---

Propose REJECT

Vote
I approve this response.
For: 7
Against: 7
Abstain: 11

--- 18.09.2008 [1] ---

3.76.2 10GBASE-PR and 10/1GBASE-PRX FEC correction enable

This bit enables the FEC decoder to provide error correction. When this bit is disabled, the FEC decoder will detect but not correct errors. Delay through the FEC decoder will remain constant under both conditions. This bit is enabled by default.

Change
"3.76.15:2" to "3.76.15:3"

Vote
I approve this response.
For: 9
Against: 5
Abstain: 11

--- 17.09.2008 ---

Add to Register 3.76

3.76.2 10GBASE-PR and 10/1GBASE-PRX FEC receive enable
This bit enables the 64/66 bit FEC decoder to provide error correction. This bit is enabled by default, but may be disabled if the link BER is better that 10E-12 without FEC.

Change
"3.76.15:2" to "3.76.15:3"

Vote
I approve this change.
For: 5
Against: 7
Abstain: 11

---

*Cl* **45** *SC* **45.2.1.88** *P* **28** *L* **19** # 2269

Hajduczenia, Marek Nokia Siemens Networ

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

Subclauses 45.2.1.88.1 and 45.2.1.88.2 do not follow the structure of the remainder of definitions in subclause 45.2.1 i.e. definitions start from 1.176.0 while should start from 1.176.1 to keep consistency with the other subclauses.

*SuggestedRemedy*

Change current subclause 45.2.88.1 to 45.2.88.2 (register 1.176.1)
Change current subclause 45.2.88.2 to 45.2.88.1 (register 1.176.0)

*Response* *Response Status* **C**

ACCEPT.
Changed from "E" to "T"

---

*Cl* **45** *SC* **45.2.1.88.2** *P* **28** *L* **28** # 1638

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *FEC registers*

subclause 45.2.1.88.2 states that "10GBASE-PR FEC error indication is controlled by the FEC enable error indication bit in the FEC control register (see @@Subclause 45.2.1.85.2@@).". This is in contradiction to subclause 45.2.89.1 which states that it is register 1.177.0

*SuggestedRemedy*

change the last sentence of 45.2.1.88.2 to be "10GBASE-PR FEC error indication is controlled by the FEC enable error indication bit in the FEC control register (see Subclause 45.2.1.89.1).".

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c45
See resolution to comment 2272

---

*Cl* **45** *SC* **45.2.1.89** *P* **28** *L* **40** # 1977

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *PROCESSED], FEC registers*

Need an entry for strong FEC enable (even if in 10G-EPON it's always on)

*SuggestedRemedy*

In the table for 10GBASE-PR FEC control register bit definitions, insert a row for strong FEC enable, 1 = enabled. You can make it read-only.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #2272

---

*Cl* **45** *SC* **45.2.1.89** *P* **28** *L* **46** # 2270

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Subclauses 45.2.1.89.1 and 45.2.1.89.2 do not follow the structure of the remainder of definitions in subclause 45.2.1 i.e. definitions start from 1.177.0 while should start from 1.177.1 to keep consistency with the other subclauses.

*SuggestedRemedy*

Change current subclause 45.2.89.1 to 45.2.89.2 (register 1.177.1)
Change current subclause 45.2.89.2 to 45.2.89.1 (register 1.177.0)

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #2272

*Cl* **45** *SC* **45.2.1.89.1** *P* **28** *L* **49** # 2408

Mandin, Jeff PMC Sierra

*Comment Type* **T** *Comment Status* **A** *PROCESSED], FEC registers*

The description of the "FEC enable error indication" management parameter describes how the parameter is implemented in the PCS (ie. it creates an invalid value in the 2 bit sync header).

Instead, it should describe the parameter from the management perspective ie. the parameter affects whether the receiver keeps or discards certain packets.

*SuggestedRemedy*

Modify 45.2.1.89.1 to read as follows:

45.2.1.89.1 FEC enable error indication (1.177.0)

This bit instructs the 10GBASE-PR FEC decoder to indicate decoding errors to the upper layers (see @@Subclause 45.2.1.84.2@@ and @@Subclause 74.8.3@@).

When written as a one, the receiving PCS replaces 66B blocks received in uncorrectable FEC codewords with /E/ (ie. error codes). As a consequence, the receiving MAC discards any packet which includes data that was received in an uncorrectable FEC codeword (even though the packet itself might or might not contain errors).

When written as a zero, the receiving PCS does not modify 66B blocks received in uncorrectable FEC codewords. As a consequence, the receiving MAC performs regular processing on a packet that includes data that was received in an uncorrectable FEC codeword (though the packet itself may contain errors which might or might not be detected by the MAC FCS).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #2272

*Cl* **45** *SC* **45.2.1.89.2** *P* **28** *L* **49** # 181561

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *resubmit references*

The two references in this subclause need to be updated.

*SuggestedRemedy*

Replace 45.3.2.84.2 with 45.2.1.88.2.
Replace 74.8.3 with 76.2.3.3.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2272

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft

Replace 45.2.1.84.2 with active link to 45.2.1.88.2
Replace 74.8.3 with active link to 76.2.3.3

==========

*Cl* **45** *SC* **45.2.1.90** *P* **29** *L* # 1979

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *BA registers*

Description of reading a pair of registers, different to the other pair of registers forming a counter.

*SuggestedRemedy*

See text in 54.2 "In the case of two registers that together form a 32-bit counter...". Unless you have a strong reason to be different, refer to that, swap the two registers, and mark the registers "MW = Multi-word". See 45.2.6.12 10P/2B TPS-TC coding violations counter (Registers 6.25, 6.26) for an (the?) example. I've made this a TR to encourage you to agree what to do with the working group chair or his delegate, not because I think this is the only possible remedy. Liaise with P802.3ba.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2272

*Cl* **45** *SC* **45.2.1.90** *P* **29** *L* **1** # 2330

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *PROCESSED], FEC registers*

Subclause 45.2 says "In the case of two registers that together form a 32-bit counter, whenever the most significant 16-bit register of the counter is read, the 32-bit counter value is latched into the register pair, the value being latched before the contents of the most significant 16 bits are driven on the MDIO interface and the contents of both registers is cleared to all zeros. A subsequent read from the least significant 16-bit register will return the least significant 16 bits of the latched value, but will not change the contents of the register pair. Writing to these registers has no effect. Counters that adhere to this behaviour are marked in their bit definition tables with the tag "MW = Multi-word"."
The registers 1.178, 1.179, 1.180, 1.181 should be marked as WM instead of NR. A detailed list of changes in the field "Suggested Remedy"

*SuggestedRemedy*

List of changes:
In sublause 45.2.1.90, Table 45-67, register 1.178.15:0, column R/W: RO, MW
In sublause 45.2.1.90, Table 45-67, register 1.179.15:0, column R/W: RO, MW
In sublause 45.2.1.91, Table 45-68, register 1.180.15:0, column R/W: RO, MW
In sublause 45.2.1.91, Table 45-68, register 1.181.15:0, column R/W: RO, MW
Replace footnote to Table 45-67, Table 45-68 from "aRO = Read only, NR = Non Roll-over" to "aRO = Read only, MW = Multi-Word"
Remove the following text from 45.2.1.90: "Registers 1.178, 1.179 are used to read the value of a 32-bit counter. When registers 1.178 and 1.179 are used to read the 32-bit counter value, the register 1.178 is read first, the value of the register 1.179 is latched when (and only when) register 1.178 is read and
reads of register 1.179 returns the latched value rather than the current value of the counter."
Remove the following text from 45.2.1.91: "Registers 1.180, 1.181 are used to read the value of a 32-bit counter. When registers 1.180 and 1.181 are used to read the 32-bit counter value, the register 1.180 is read first, the value of the register 1.181 is latched when (and only when) register 1.180 is read and reads of register 1.181 returns the latched value rather than the current value of the counter."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #2272

*Cl* **45** *SC* **45.2.1.90** *P* **29** *L* **4** # 181562

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *ESSED], resubmit references*

Reference to Clause 74.
[GK] Also page 28 line 54 and page 29 line 27

*SuggestedRemedy*

Remove the sentence.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to Comment #2272

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft

Change reference to 76.2.3.3.2

Add to 76.2.3.3.2
FEC_corrected_blocks_counter
TYPE: 32 bit non Roll-over counter
A corrected block is an FEC block that has invalid parity, and has been corrected by the FEC decoder. FEC_corrected_blocks_counter counts once for each corrected FEC blocks processed when decode_done and decode_success are True. This counter is provided by a management interface that may be mapped to the 45.2.1.90 register (1.178, 1.179).

==========

*Cl* **45** *SC* **45.2.1.90** *P* **29** *L* **5** # 1978

Dawe, Piers Avago

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

It's not PHY reset; MMDs can be reset independently

*SuggestedRemedy*

Depending where the register ends up, PCS reset or whatever, or MMD reset.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2272

*Cl* **45** *SC* **45.2.1.90** *P* **29** *L* **9** # 1573

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *FEC counters text*

The last sentence of subclause 45.2.1.90 contains "reads of register 1.179 returns the latched value" This should be "reads of register 1.179 return the latched value"

*SuggestedRemedy*

Change the last sentence of subclause 45.2.1.90 to end "reads of register 1.179 return the latched value rather than the current value of the counter."

*Response* *Response Status* **C**

ACCEPT.
Moved to c45

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*Cl* **45** *SC* **45.2.1.91** *P* **29** *L* **26** # 2103

Kramer, Glen Teknovus, Inc.

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

Clause refers to an incorrect PHY

*SuggestedRemedy*

10GBASE-R should be 10GBASE-PR

*Response* *Response Status* **C**

ACCEPT.
See resolution to comment 2272

---

*Cl* **45** *SC* **45.2.1.91** *P* **29** *L* **27** # 181563

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *BE PROCESSED], resubmit*

Reference to Clause 74.

*SuggestedRemedy*

Remove the sentence.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to Comment #2272

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft

Change reference to 76.2.3.3.2

Add to 76.2.3.3.2
FEC_uncorrected_blocks_counter
TYPE: 32 bit non Roll-over counter
An uncorrected block is an FEC block that has invalid parity, and has not been corrected by the FEC decoder.
FEC_uncorrected_blocks_counter counts once for each uncorrected FEC blocks processed when decode_done is True and decode_success is Fasle. This is a 32-bit counter. This variable is provided by a management interface that may be mapped to the 45.2.1.91 register (1.174, 1.175).

==========

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*Cl* **45** *SC* **45.2.1.91** *P* **29** *L* **32** # 1574

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *FEC counters text*

The last sentence of subclause 45.2.1.91 contains "reads of register 1.181 returns the latched value" This should be "reads of register 1.181 return the latched value"

*SuggestedRemedy*

Change the last sentence of subclause 45.2.1.91 to end "reads of register 1.181 return the latched value rather than the current value of the counter."

*Response* *Response Status* **C**

ACCEPT.
Moved to c45
See resolution to comment 2272

*Cl* **45** *SC* **45.2.1.92** *P* **16** *L* **28** # 1692

Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

In Table 45-69, for Bit(s)1.182.1, Description "In the OLT, this bit always has a value of 1" is incorrect.

*SuggestedRemedy*

Change to"In the ONU, this bit always has a value of 1"

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

*Cl* **45** *SC* **45.2.1.92** *P* **16** *L* **31** # 1693

Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

In Table 45-69, for Bit(s)1.182.0, Description "In the ONU, this bit always has a value of 1" is incorrect.

*SuggestedRemedy*

Change to "In the OLT, this bit always has a value of 1"

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

*Cl* **45** *SC* **45.2.188** *P* **27** *L* **46** # 2257

Ganga, Ilango Intel

*Comment Type* **TR** *Comment Status* **A** *l, BA registers, FEC registers*

Register 1.176 through 1.179 is not listed in 45.2.1 (Table 45-3) in 802.3av document. This is a reserved field in 802.3-2008 (802.3ay/D2.3). IEEE 802.3ba has used the register range 1.176 through 1.309, with the assumption that 802.3av is using register 1.310 to 1.319.

Reconcile the difference with 802.3ba. List the PR FEC registers in Table 45-3 so it is understood that 802.3av is using these registers.

*SuggestedRemedy*

As per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See Resolution to comment #2272

*Cl* **45** *SC* **45.2.188** *P* **28** *L* **4** # 2253

Ganga, Ilango Intel

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

Table 45-65 through 45-68 is already used in 802.3-2008 (.3ay/2.3) for WIS registers.

Hence use a dummy number (alpha numeric) for new tables (to avoid conflict with existing tables) and provide renumbering instructions as appropriate.

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See Resolution to comment 2160 and 2272

*Cl* **45** *SC* **45.2.3** *P* **30** *L* **10** # 1639

Anslow, Peter Nortel Networks

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

The second to last row of the amended Table 45-82 contains "3.75 thgough 3.32 767". "thgough" should be "through"

*SuggestedRemedy*

change the second to last row of Table 45-82 to have Register address "3.75 through 3.32 767"

*Response* *Response Status* **C**

ACCEPT.
Moved to c45

*Cl* **45** *SC* **45.2.3** *P* **30** *L* **20** # 2271

Hajduczenia, Marek Nokia Siemens Networ

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

Missing space in row 8, for 0010 10/1Gb/s.
Is "10/1Gb/s", should be "10/1 Gb/s".

*SuggestedRemedy*

Is "10/1Gb/s", should be "10/1 Gb/s" (missing space)

*Response* *Response Status* **C**

ACCEPT.

Cl **45** SC **45.2.3** P **30** L **6** # 2254

Ganga, Ilango Intel

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

Provide table title with Table number for the PCS registers listed in this page.

*SuggestedRemedy*

As per comment.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Insert the following heading text to line 6: "Table 45-82-PCS registers".Insert the following heading text to line 16: "Table 45-83-PCS control 1 register bit definitions"

Cl **45** SC **45.2.3** P **30** L **8** # 1575

Anslow, Peter Nortel Networks

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

The register name for address 3.74 is "10GBASE-PR and 10/1GBASE-PRX Clause 76 BER Monitor Control". Including the clause number in this name is a bad idea because future clause re-numbering would change the register name.

*SuggestedRemedy*

change the register name for address 3.74 to "10GBASE-PR and 10/1GBASE-PRX BER Monitor Control".
Also change the title of subclause 45.2.3.29 to "10GBASE-PR and 10/1GBASE-PRX BER Monitor Control register (Register 3.74)"

*Response* *Response Status* **C**

ACCEPT.
Moved to c45

Cl **45** SC **45.2.3.29** P **30** L **27** # 181564

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *BE PROCESSED], resubmit*

There is some missing description of the BER monitor behavior. Back in 3av_0801_mandin_2.pdf, the idea was to set the hi_ber flag in the 10GBASE-R and 10GBASE-T status register. If we still want to do that, then we need to add and show the modified register definition. The other option would be to create a new register only for PR and PRX. Since we've added register 3.74, it may make sense to put this functionality here and update the Clause 76 text as appropriate. Also, 10GBASE-R and 10GBASE-T have another register that represents a latched version ofthe high BER flag. We need to decide if we want this functionality, too.

*SuggestedRemedy*

Create new 10GBASE-PR and 10/1GBASE-PRX BER Monitor Status register modeled after 10GBASE-R status and 10GBASE-R status 2 registers.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

--- 18.09.2008 ---

See 3av_0809_lynskey_2.pdf for a detailed list of changes to the draft.

---

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by commenter against next draft

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Cl **45** SC **45.2.3.29** P **30** L **30** # 1680

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

"10GBASE-R" should be "10GBASE-PR"

*SuggestedRemedy*

change "10GBASE-R" to "10GBASE-PR"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **45** *SC* **45.2.3.29** *P* **30** *L* **30** # 2104

Kramer, Glen Teknovus, Inc.

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

subclause refers to incorrect PHY

*SuggestedRemedy*

10GBASE-R should be 10GBASE-PR

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See 1680

*Cl* **45** *SC* **45.2.3.29** *P* **30** *L* **32** # 181553

Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A** *resubmit references*

Cross reference refers to subclause that doesn't exist.

*SuggestedRemedy*

Replace with 76.2.3.4 and provide linked cross reference so it will update and be correct if subclause numbering changes.

*Response* *Response Status* **C**

ACCEPT.

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft

Replace with active link.

==========

*Cl* **45** *SC* **45.5** *P* **31** *L* **4** # 2255

Ganga, Ilango Intel

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED], PICS*

Update appropriate PICS tables as applicable to 802.3av

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
For list of changes, see 3av_0809_kramer_6.pdf.

*Cl* **56** *SC* **56.1** *P* **34** *L* **19** # 1980

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED] joint*

You can't reasonably call any PON "symmetric"; as 64.1 says, "P2MP is an asymmetrical medium based on a tree (or tree-and-branch) topology" (and see footnote a to Table 56-1), and as 76 says "The architecture is asymmetrical, based on a tree and branch topology". Also, the 1000BASE-PX is just as "symmetric" (or not) as 10GBASE-PR. Calling 1000BASE-PX "legacy" is pejorative; 802.3 has not decided to mark it as not recommended.

*SuggestedRemedy*

In nearly every case, just delete "symmetric" and "asymmetric" and "legacy". Occasionally substitute "10G", "10/1G" or "10 Gb/s" or "1 Gb/s" and so on. This will make the document more readable as well as more correct.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **34** *L* **19** # 2418

DIAB, WAEL BROADCOM

*Comment Type* **ER** *Comment Status* **R** *3E PROCESSED], See#2274*

Two different styles are used to reference the 1Gb/s and 10G EPON systems. Please make consistant

*SuggestedRemedy*

Change 10G-EPON to 10Gb/s EPON

*Response* *Response Status* **U**

REJECT.
Use 10G-EPON per comment #971 from March 2008.

*Cl* **56** *SC* **56.1** *P* **34** *L* **19** # 2273

Hajduczenia, Marek Nokia Siemens Networ

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

Is "1Gb/s", should be "1 Gb/s" (missing space)

*SuggestedRemedy*

Is "1Gb/s", should be "1 Gb/s" (missing space)

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **34** *L* **19** # 1694

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **R**

In Subclanse 56.1 Overview, Subclause 56.1.1 is absent.
Although the text in line 19 reads "Shown in Figure 56-1", Figure 56-1 is absent.

*SuggestedRemedy*

Add "Subclause 56.1.1 Ethernet in the First Mile Topology".
Add Figure 56-1--The Relationship between EFM and OSI Reference Model on Page 34.

*Response* *Response Status* **C**

REJECT.
Basically, this clause only shows differences from Cl 56 of IEEE 802.3ay D2.2. So this clause does not have to show Subclause 56.1.1 and Fig.56-1.

*Cl* **56** *SC* **56.1** *P* **34** *L* **20** # 2294

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *See#1576*

Spelling error. Is "Figiure", should be "Figure"

*SuggestedRemedy*

Spelling error. Is "Figiure", should be "Figure"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **34** *L* **20** # 1993

Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *See#1576*

Correctly spell "Figure".

*SuggestedRemedy*

Correctly spell "Figure".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **34** *L* **20** # 1749

LANDRY, MATTHEW SILICON LABS

*Comment Type* **E** *Comment Status* **A** *See#1576*

"Figiure" mispelled.

*SuggestedRemedy*

Replace "Figiure" with "Figure"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **34** *L* **20** # 1576

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *See#1576*

"Figiure 56-4" should be "Figure 56-4"

*SuggestedRemedy*

change "Figiure 56-4" to "Figure 56-4"

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1** *P* **34** *L* **20** # 1666

Marris, Arthur Cadence

*Comment Type* **E** *Comment Status* **A** *See#1576*

Spelling 'Figiure'

*SuggestedRemedy*

Figure

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **34** *L* **28** # 1577

Anslow, Peter Nortel Networks

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

The third paragraph starts "EFM architecture is extended in Clause 75 ..." This would be better as "The EFM architecture is extended in Clause 75 ..."

*SuggestedRemedy*

Change the start of the third paragraph from "EFM architecture is extended in Clause 75 ..." to "The EFM architecture is extended in Clause 75 ..."

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1** *P* **34** *L* **31** # 1981

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Terminology: line 12 says "EFM also introduces the concept of Ethernet Passive Optical Networks (EPONs)": I think this is how the world will use the term: any 802.3 PON is an EPON. While line 34 says "In the following clauses, the symmetric 1 Gb/s EPON is referred to as EPON, while symmetric 10 Gb/s and asymmetric EPONs are referred to as 10G-EPON.".

*SuggestedRemedy*

Where necessary, this document needs to say "1G-EPON" rather than just "EPON". See another comment about "symmetric". So, "In the following clauses, the 1 Gb/s EPON is referred to as 1G-EPON, while 10 Gb/s EPONs are referred to as 10G-EPON, and EPONs with 10 Gb/s in the downstream direction and 1 Gb/s upstream are referred to as 10/1G-EPON."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Vote to approve:
The Task Force adopts the naming conventions of:
"EPON" refers to any Ethernet based PON defined in 802.3
"1G-EPON" refers to EFM PON
"10G-EPON" refers to all PONs defined in 802.3av (both 10GBASE-PR and 10/1GBASE-PRX)
"10/10G-EPON" refers to only 10GBASE-PR
"10/1G-EPON" refers to only 10/1GBASE-PRX

For: 19
Against: 5
Abstain: 3

Editors to make appropriate changes in the draft.

*Cl* **56** *SC* **56.1** *P* **34** *L* **32** # 1578

Anslow, Peter Nortel Networks

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

The third paragraph ends "while symmetric 10 Gb/s and asymmetric EPONs are referred to as 10G-EPON." This would be better as "while the symmetric 10 Gb/s and asymmetric EPONs are referred to as 10G-EPON."

*SuggestedRemedy*

Change the end of the third paragraph from "while symmetric 10 Gb/s and asymmetric EPONs are referred to as 10G-EPON." to "while the symmetric 10 Gb/s and asymmetric EPONs are referred to as 10G-EPON."

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1** *P* **35** *L* **2** # 1983

Dawe, Piers Avago

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

Font too small. Should be 8 point where space allows: see style guide. You've got the space here and the text will get shorter when you use lower case appropriately

*SuggestedRemedy*

Change all the 7 point text to 8 point in this and similar figures, also 76-8 and similar.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1** *P* **35** *L* **49** # 2274

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *3E PROCESSED], See#2274*

Inconsistent figure caption. 10G-EPON is used in captions of Figure 65-3 and Figure 56-4. Figure 56-2 caption should read as follows "Architectural positioning of EFM: P2MP symmetric EPON architecture (1 Gb/s downstream, 1 Gb/s upstream)"

*SuggestedRemedy*

Change Figure 56-2 caption to read as follows "Architectural positioning of EFM: P2MP symmetric EPON architecture (1 Gb/s downstream, 1 Gb/s upstream)"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to:
Architectural positioning of EFM: P2MP symmetric 1G-EPON architecture (1 Gb/s downstream, 1 Gb/s upstream)

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **10** # 1984

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *See#1640*

Claiming that there are "two systems" is too phoney. Apart from the several budget options, there are obviously three. Editorial and other corrections and (IMHO) improvements.

*SuggestedRemedy*

For P2MP optical fiber topologies, EFM defines three EPON families: a) 1G-EPON with a nominal bit rate of 1 Gb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology. The 1 Gb/s P2MP PHYs use the 1000BASE-X Physical Coding Sublayer (PCS) of 36.2 and 65.2.2, the Physical Medium Attachment (PMA) sublayer of 36.3 and 65.3, and an optional forward error correction (FEC) function defined in 65.2.3; b) 10G-EPON with a nominal bit rate of 10 Gb/s. The 10 Gb/s P2MP PHYs use the PCS of Clause 66 and 76.2, including a mandatory FEC function and the PMA of Clause 51 and 76.3; c) 10/1G-EPON with a nominal bit rate of 10 Gb/s in the downstream direction and 1 Gb/s upstream, using a combination of the sublayers for 1G-EPON and 10G-EPON.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **11** # 2422

DIAB, WAEL BROADCOM

*Comment Type* **TR** *Comment Status* **A** *See#1640*

1000 Mb1 Gb/s is incorrect

*SuggestedRemedy*

Change to 1000 Mb/s,

*Response* *Response Status* **C**

ACCEPT.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **11** # 1750

LANDRY, MATTHEW SILICON LABS

*Comment Type* **E** *Comment Status* **A** *See #1640*

There appears to be some error in wording or simply confusion on my part: "PON with a symmetric, EFM supports a nominal bit rate of 1000 Mb1 Gb/s ..."

The first clause seems incomplete. The Mb-Gb part seems muddled.

*SuggestedRemedy*

If the wording is correct and I am just misunderstanding, do nothing. If not, correct as appropriate.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **11** # 1640

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *3E PROCESSED], See#1640*

section a) is garbled and very difficult to understand. It says "a) PON with a symmetric, EFM supports a nominal bit rate of 1000 Mb1 Gb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology. The P2MP PHYs use the 1000BASE--X Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA) sublayer defined in Clause 65@@Clause 60@@, and an optional FEC Forward Error Correction (FEC) function defined in Clause 65.Clause 65;"

*SuggestedRemedy*

change section a) to "a) PON with a nominal bit rate of 1000 Mb/s in both downstream and upstream directions (EPON), supports a nominal bit rate of 1000 Mb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology. The P2MP PHYs use the 1000BASE-X Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA) sublayer defined in Clause 65 and an optional Forward Error Correction (FEC) function defined in Clause 65;"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c56
change section a) to
"a) PON with a nominal bit rate of 1000 Mb/s in both downstream and upstream directions (1G-EPON), supports a nominal bit rate of 1000 Mb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology. The P2MP PHYs use the 1000BASE-PX Physical Coding Sublayer (PCS), the Physical Medium Attachment (PMA) sublayer defined in Clause 65 and an optional Forward Error Correction (FEC) function defined in Clause 65;"

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **11** # 1802

Flatman, Alan LAN Technologies

*Comment Type* **E** *Comment Status* **A** *See#1640*

This sentence does not make sense.

*SuggestedRemedy*

Improve wording to make sense.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **11** # 2015

Frazier, Howard Broadcom

*Comment Type* **ER** *Comment Status* **A** *See#1640*

extraneous words "EFM supports a".

*SuggestedRemedy*

delete extraneous words "EFM supports a".

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **12** # 1695

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *See#1640*

PON with a symmetric, EFM supports a norminal bit rate of 1000 Mb1 Gb/s,

*SuggestedRemedy*

Corrected to "PON with a symmetric EFM supports a norminal bit rate of 1000 Mb/s",

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **12** # 2275

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *See#1640*

Incorrect text in the bullet a, reading "PON with a symmetric, EFM supports a nominal bit rate of 1000 Mb1 Gb/s,". Text needs to be changed as provided in the suggested remedy.

*SuggestedRemedy*

Change "PON with a symmetric, EFM supports a nominal bit rate of 1000 Mb1 Gb/s, " to "PON with a symmetric, nominal bit rate of 1000 Mb/s, "

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **12** # 1681

Jessica, Jiang Salira

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

typo "1000 Mb1 Gb/s"

*SuggestedRemedy*

remove "b1"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **12** # 1762

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *See#1640*

"bit rate of 1000Mb1 Gb/s" is wrongly typed.

*SuggestedRemedy*

"bit rate of 1 Gb/s"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **14** # 2276

Hajduczenia, Marek Nokia Siemens Networ

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

Double hyphen in the PMD name. Is "1000BASE--X", should be "1000BASE-X"

*SuggestedRemedy*

Is "1000BASE--X", should be "1000BASE-X"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **15** # 1751

LANDRY, MATTHEW SILICON LABS

*Comment Type* **E** *Comment Status* **A** *See#2277*

Regarding "Clause 65@@Clause 60@@" I am not sure why the 'external' link does not match the 'local' reference. Further, why is there both a local reference and an external link?

On line 16 there appear to be two local links, which both agree in number. And on line 21 there is only an external link. Line 48 has lopsided ampersand delimiters.

I believe I understand wanting to mark external links with ampersands. I don't fully comprehend the unpredicable use of local links concurrent with external links, especially when they sometimes don't agree.

*SuggestedRemedy*

Check links for proper reference, and eliminate unneeded links, either local or external.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2277

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **15** # 2277

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *See#2277*

Lines 15 through 17 are affected.
Text "layer defined in Clause 65@@Clause 60@@, and an optional FEC Forward Error Correction (FEC) function defined in Clause 65.Clause 65;" contains several errors:
- Doubled reference to Clause 65
- Reference to Clause 65 and then 60.
Change the indicated block of text as proposed in the suggested remedy.

*SuggestedRemedy*

Suggest to change the text:
"layer defined in Clause 65@@Clause 60@@, and an optional FEC Forward Error Correction (FEC) function defined in Clause 65.Clause 65;"
to
"layer defined in @@Clause 65@@, and an optional FEC Forward Error Correction (FEC) function defined in @@Clause 65@@;"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **1617** # 1696

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *See#2277*

the Physical Medium Attachment(PMA) sublayer defined in Cause 65 @@Clause 60@@,

*SuggestedRemedy*

Corrected to "the Physical Medium Attachment(PMA) sublayer defined in Cause 65 ,

*Response* *Response Status* **C**

ACCEPT.
See comment #2277

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **17** # 1579

Anslow, Peter Nortel Networks

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

section b) wording would be improved by changing "in downstream" to "downstream" twice and "an mandatory" to "a mandatory"

*SuggestedRemedy*

In section b) change "in downstream" to "downstream" twice and "an mandatory" to "a mandatory"

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **20** # 1687

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *See#2278*

The sentence is not very clear on the following:
1) PCS is not only 10GBASE-R
2) mandatory FEC is applied only for 10Gbps data.

Suggest to rephase the sentence.

*SuggestedRemedy*

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #2278

Comment Type changed from ER to E based on commenters vote of "APPROVE WITH COMMENTS". This change was made on Sep 24 after approval of proposed comment resolution by the Task Force.

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **20** # 2278

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *See#2278*

10G-EPON does not use 10GBASE-R PCS but defined its own PCS i.e. 10GBASE-PR.
Change reference to "10GBASE-R" PCS to "10GBASE-PR" PCS

*SuggestedRemedy*

Change "use the 10GBASE-R PCS" to "use the 10GBASE-PR PCS defined in @@Clause 76@@".
Make sure that the "@@Clause 76@@" is changed to a live cross reference link.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **21** # 1667

Marris, Arthur Cadence

*Comment Type* **E** *Comment Status* **A** *See#1579*

Spelling 'an'

*SuggestedRemedy*

Replace 'an' with 'a'

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **21** # 2419

DIAB, WAEL BROADCOM

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

Under section (b) there is no mention of what PCS is used for the case of 1Gb/s upstream

*SuggestedRemedy*

Please add the reference and pointer to the appropriate clauses

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "The P2MP PHYs use the 10BASE-R PCS, "to "The P2MP PHYs for the symmetric 10G-EPON use the 10BASE-R PCS (see @@Clause 75@@ whereas the P2MP PHYs for the asymmetric 10G-EPON use the 10BASE-R PCS for the downstream direction (see @@Clause 75@@) and 1000BASE-X PCS (see @@Clause 65) for the upstream direction."

*Cl* **56** *SC* **56.1.2** *P* **38** *L* **46** # 2396

Law, David 3Com

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

A 'frame' or 'MAC frame' is from the Destination Address to Frame Check Sequence inclusive, a 'packet' or 'MAC packet' is a MAC frame plus Preamble, Start Frame Delimiter and Extension.

Based on this the LLID replaces the first two bytes of a packet.

*SuggestedRemedy*

Change the text 'It achieves this by prepending a Logical Link Identification (LLID) to the beginning of each data frame, replacing two octets of the preamble.' to read 'It achieves this by providing a Logical Link Identification (LLID) in each packet by replacing two octets of the preamble.'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.2** *P* **41** *L* **14** # 2259
Chalupsky, David Intel Corp.

*Comment Type* **E** *Comment Status* **A** *See#1640*

This sentence (which begins at line 14) is not clear "PON with a symmetric, EFM supports a nominal bit rate of 1000 Mb1 Gb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology."

*SuggestedRemedy*

Not sure what the intent was, but if I interpret this correctly, replace the first sentence (starting at line 14) with "PON with a symmetric nominal bit rate of 1 Gb/s, shared amongst the population of Optical Network Units (ONUs) attached to the P2MP topology."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #1640

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*Cl* **56** *SC* **56.1.2.1** *P* **38** *L* **25** # 1641
Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*

The draft shows the word "machines" in strikeout font and the word "diagrams" in underline font indicating that this amendment has changed these words. However 802.3ay draft 2.2 had already made this change.

*SuggestedRemedy*

Remove the word "machines" in strikeout font and show the word "diagrams" in normal font.

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

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*Cl* **56** *SC* **56.1.2.1** *P* **38** *L* **27** # 1697
Lin, Rujian Shanghai Luster Terab

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

state diagrams,

*SuggestedRemedy*

state diagrams

*Response* *Response Status* **C**

ACCEPT.

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*Cl* **56** *SC* **56.1.2.1** *P* **38** *L* **28** # 2004
Frazier, Howard Broadcom

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

"The issues related with coexistence..." s/b "The issues related to coexistence...".

*SuggestedRemedy*

change as suggested.

*Response* *Response Status* **C**

ACCEPT.

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*Cl* **56** *SC* **56.1.2.1** *P* **38** *L* **31** # 1698
Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **R**

more ONUs

*SuggestedRemedy*

more Optical Network Units(ONUs)

*Response* *Response Status* **C**

REJECT.
That is already defined as ONUs. See Line 13 of Page 38.

---

*Cl* **56** *SC* **56.1.2.1** *P* **38** *L* **32** # 2279
Hajduczenia, Marek Nokia Siemens Networ

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

Text refers to Figure 56-2 only, while Figure 56-3 and 56-4 were added. Text "Every P2MP topology consists of one Optical Line Terminal (OLT) plus one or more ONUs, as shown in Figure 56-2." needs an update, as suggested in the remedy.

*SuggestedRemedy*

Change
"Every P2MP topology consists of one Optical Line Terminal (OLT) plus one or more ONUs, as shown in Figure 56-2."
to
"Every P2MP topology consists of one Optical Line Terminal (OLT) plus one or more ONUs, as shown in Figure 56-2, Figure 56-3 and Figure 56-4, for EPON, symmetric 10G-EPON and asymmetric 10G-EPON, respectively."
Make sure that the links to Figures are live cross references.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.2.1** *P* **38** *L* **38** # 1699
Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A**
XGMII, are

*SuggestedRemedy*
XGMII are

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

*Cl* **56** *SC* **56.1.2.2** *P* **38** *L* **40** # 2280
Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A**
Lines 40 and 41 are affected.
Statement about extending 10GBASE-R PCS is not true, since 10G-EPON defines its own PCS. Text "while extensions to the Clause 46 RS for P2MP topologies are described in Clause 76" needs thus extensions as provided in the suggested remedy.

*SuggestedRemedy*
Change
"while extensions to the Clause 46 RS for P2MP topologies are described in Clause 76"
to
"while RS for 10G-EPON P2MP topologies is described in Clause 76"
Make sure "Clause 76" is a live cross reference.

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

*Cl* **56** *SC* **56.1.2.2** *P* **38** *L* **43** # 2005
Frazier, Howard Broadcom

*Comment Type* **E** *Comment Status* **A** *3E PROCESSED], See#2005*
extraneous "RS".

*SuggestedRemedy*
delete

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

*Cl* **56** *SC* **56.1.2.2** *P* **38** *L* **43** # 1700
Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *3E PROCESSED], See#2005*
the Reconciliation Sublayer(RS) RS for P2P Emulation

*SuggestedRemedy*
RS for P2P Emulation

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Change "(RS) RS for P2P Emulation" to "(RS) for P2P Emulation"

*Cl* **56** *SC* **56.1.2.2** *P* **38** *L* **48** # 1642
Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*
The second paragraph of 56.1.2.2 ends "This is described in @Subclause 61.1.4.1.2@@." apart from the spurious @ symbols commented on earlier, the word "Subclause" has been added but is not shown in underline font!

*SuggestedRemedy*
Remove the word "Subclause" or show it in underline font.

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Moved to c56
See comment 1908

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **10** # 1994
Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *See#1994*
List begins with "c)".

*SuggestedRemedy*
Change list to begin with "a)".

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

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **1025** # 1701
Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *See#1994*

c) d) e) f) g) h)

*SuggestedRemedy*

Re-order as a) b) c) d) e) f).

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **12** # 1690
Joergensen, Thomas Vitesse Semiconducto

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

In items c) to h) the split ratio is defined to be "at least" 1/16 and 1/32.
I think that 1/16 and 1/32 are the maximum split ratios

*SuggestedRemedy*

Delete "at least" or replace it with "up to"

*Response* *Response Status* **C**

REJECT.
The split ratios defined in Cl 75 are not maximum. 10G-EPON has to support these values at least. The term "at least" is correct.
Changed from "E" to "T"

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **16** # 2394
Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *See#1702*

Doesn't the combination of a 10GBASE-PR-D3 PHY and a 10GBASE-PR-U3 PHY produce a PR30 power budget, similarly doesn't the combination of a 10/1GBASE-PRX-D3 PHY and a 10/1GBASE-PRX-U3 PHY produce a PRX30 power budget.

*SuggestedRemedy*

On line 16 change '.. PR10 power budget ..' to read '.. PR30 power budget ..'.
On line 25 change '.. PRX10 power budget ..' to read '.. PRX30 power budget ..'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **16** # 2000
Brown, Alan Wave7 Optics, Inc.

*Comment Type* **ER** *Comment Status* **A** *See#1702*

Third list item references incorrect power budget.

*SuggestedRemedy*

Correct "PR10 power budget" to "PR30 power budget".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **16** # 2023
Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *See#1702*

"PR10 power budget" s/b "PR30 power budget"

*SuggestedRemedy*

change as suggested

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **16** # 1702
Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *See#1702*

10GBASE-PR-D3 and 10GBASE-PR-U3, creating a PR-10 power budget,

*SuggestedRemedy*

Corrected to "10GBASE-PR-D3 and 10GBASE-PR-U3, creating a PR-30 power budget",

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **19** # 1682
Jessica, Jiang Salira

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

typo "10/1GBASE-PR-U1" should be "10/1GBASE-PRX-U1"

*SuggestedRemedy*

change "10/1GBASE-PR-U1" to "10/1GBASE-PRX-U1"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **2** # 1712

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **R**

There is no sentence describing Table 56-1

*SuggestedRemedy*

Add one sentence to describe Table 56-1

*Response* *Response Status* **C**

REJECT.
Basically, this clause only shows differences from Cl 56 of IEEE 802.3ay D2.2. This clause does not show description about Table 56-1 because it has no changes. See comment #1694 as well.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **22** # 1683

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *See#1643*

typo "10/1GBASE-PRX-U1" should be "10/1GBASE-PRX-U2"

*SuggestedRemedy*

change "10/1GBASE-PRX-U1" to "10/1GBASE-PRX-U2"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **22** # 1643

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *See#1643*

item g) starts "10/1GBASE-PRX-D2 and 10/1GBASE-PRX-U1," this should be "10/1GBASE-PRX-D2 and 10/1GBASE-PRX-U2,"

*SuggestedRemedy*

in item g) change "10/1GBASE-PRX-D2 and 10/1GBASE-PRX-U1," to "10/1GBASE-PRX-D2 and 10/1GBASE-PRX-U2,"

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **22** # 2001

Brown, Alan Wave7 Optics, Inc.

*Comment Type* **ER** *Comment Status* **A** *See#1643*

Fifth list item references incorrect PMD.

*SuggestedRemedy*

Correct "10/1GBASE-PRX-U1" to "10/1GBASE-PRX-U2".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **22** # 1703

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *See#1643*

10/1GBASE-PRX-D2 and 10/1GBASE-PRX-U1, creating a PRX20 power budget,

*SuggestedRemedy*

Corrected as "10/1GBASE-PRX-D2 and 10/1GBASE-PRX-U2, creating a PRX20 power budget",

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **25** # 1704

Lin, Rujian Shanghai Luster Terab

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

10/1GBASE-PRX-D3 and 10/1GBASE-PRX-U3, creating a PRX10 power budget,

*SuggestedRemedy*

Corrected as "10/1GBASE-PRX-D3 and 10/1GBASE-PRX-U3, creating a PRX30 power budget",

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **25** # 2024

Frazier, Howard Broadcom

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

"PRX10 power budget" s/b "PRX30 power budget"

*SuggestedRemedy*

change as suggested

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **29** # 2393

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *See#2393*

The text about associated PMDs should be included before the list, in addition this subclause is discussion Physical layer signaling systems, not just PMDs, so that should be reflected in the introduction to the lettered list.

*SuggestedRemedy*

Change the text:

'.. FEC capability, as defined in @@Clause 76@@. The family of P2MP Physical Layer signaling systems includes the following series of PMD combinations:'

to read:

'.. FEC capability, as defined in @@Clause 76@@. All of these systems employ the PMD defined in Clause 75. This family of P2MP Physical Layer signaling systems includes the following series of PHY combinations:'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the"Additionally, EFM .... PMD combinations:" to "Additionally, EFM introduces a family of Physical Layer signaling systems which are derived from 10GBASE-R, but which include new 10GBASE-PR RS, PCS and PMA, along with a mandatory FEC capability, as defined in @@Clause 76@@. All of these systems employ the PMD defined in Clause 75. The family of P2MP Physical Layer signaling systems utilizes 10GBASE-R signaling for the downstream direction while supporting both 10GBASE-R and 1000BASE-X upstream signaling in the following series of PHY combinations:"

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **5** # 2261

Chalupsky, David Intel Corp.

*Comment Type* **E** *Comment Status* **A** *See#2393*

incomplete description: the sentence "Additionally, EFM introduces a family of Physical Layer signaling systems which are derived from
10GBASE-R, but which include extensions to the RS, PCS and PMA, along with a mandatory FEC capability, as defined in @@Clause 76@@." omits the fact that the upstream data in the PRX types use 1000BASE-X.

*SuggestedRemedy*

replace sentence with "Additionally, EFM introduces a family of Physical Layer signaling systems which are derived from
10GBASE-R and 1000BASE-X, but which include extensions to the RS, PCS and PMA, along with a mandatory FEC capability, as defined in @@Clause 76@@."

Or place the 1Gb reference in the following sentence:

"Additionally, EFM introduces a family of Physical Layer signaling systems which are derived from 10GBASE-R, but which include extensions to the RS, PCS and PMA, along with a mandatory FEC capability, as defined in @@Clause 76@@. The family of P2MP Physical Layer signaling systems utilizes 10GBASE-R signalling for the downstream direction while supporting both 10GBASE-R and 1000BASE-X upstream signalling in the following series of PMD combinations:"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #2393

*Cl* **56** *SC* **56.1.3** *P* **39** *L* **6** # 2281

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *See #2393*

Lines 6 - 7 are affected.
Statement about extending 10GBASE-R RS, PCS and PMA is not true since 10G-EPON defines its own PCS and RS. Text "which are derived from 10GBASE-R, but which include extensions to the RS, PCS and PMA, along with a mandatory FEC capability, as defined in @@Clause 76@@" needs thus extensions as provided in the suggested remedy.

*SuggestedRemedy*

Change
"which are derived from 10GBASE-R, but which include extensions to the RS, PCS and PMA, along with a mandatory FEC capability, as defined in @@Clause 76@@"
to
"which are derived from 10GBASE-R, but include new 10GBASE-PR RS, PCS and PMA, featuring a mandatory FEC capability, as defined in @@Clause 76@@"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #2393

*Cl* **56** *SC* **56.1.3** *P* **40** *L* # 2421

DIAB, WAEL BROADCOM

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

The replacement of Table 56-1 is missing the Cu PMDs. In 802,3-2005 those appear on the next page a continued table, perhaps that is why they were missed.

*SuggestedRemedy*

Please add the 4 Cu PMDs back

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add 10PASS-TS-O, 10PASS-TS-R, 2BASE-TL-O and 2BASE-TL-R back at end of table.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **1** # 2107

Kramer, Glen Teknovus, Inc.

*Comment Type* **TR** *Comment Status* **A** *3E PROCESSED], See#2107*

The proposed new table 56-1 misses 4 PMD types listed in 802.3ay D2.2

*SuggestedRemedy*

Add rows for
10PASS-TS-O
10PASS-TS-R
2BASE-TL-O
2BASE-TL-R

See 802.3ay D2.2, page 5

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **23** # 1753

Hirth, Ryan Teknovus

*Comment Type* **E** *Comment Status* **A** *See#1753*

The rates for the 10/1GBASE-PRX PHYs are reversed. A "D" type PHY opperates at 10Gbps and a "U" type PHY opperates at 1Gbps.

*SuggestedRemedy*

Swap 1000Mb/s with 10Gb/s for PRX-D1 - D3.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Basically, PRX-D type interfaces for OLTs transmit 10 Gb/s downstream signals and receive 1 Gb/s upstream signals. "Rate" for PRX-D type interfaces will be changed to 10 Gb/s downstream and 1000 Mb/s upstream. PRX-U type interfaces for ONUs receive 10 Gb/s downstream signals and tramsmit 1 Gb/s upstream signals. "Rate" for PRX-U type interfaces will be changed to 10 Gb/s downstream and 1000 Mb/s upstream.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **23** # 1705

Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *3E PROCESSED], See#1753*

In Table 56-1,
10/1GBASE-PRX-D1 OLT 1000 Mb/s

*SuggestedRemedy*

Add: Table 56-1 Title
Correction: 10/1GBASE-PRX-D1 OLT 10 Gb/s

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Already resolved in comment #2392

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **24** # 2392

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Why is the Receive rate being used for the Rate column, for example for 10/1GBASE-PRX-D1 the rate is listed as 1000MB/s.

*SuggestedRemedy*

For each of the dual-rate PHYs list both the TX and RX rate, for example for the 10/1GBASE-PRX-D1 PHY list:

10Gb/s transmit
1000Mb/s receive

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **25** # 1706

Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *See#1753*

10/1GBASE-PRX-U1 ONU 10 Gb/s

*SuggestedRemedy*

Correction: 10/1GBASE-PRX-U1 ONU 1000 Mb/s

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **26** # 1707
Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *See#1753*
10/1GBASE-PRX-D2 OLT 1000 Mb/s

*SuggestedRemedy*
10/1GBASE-PRX-D2 OLT 10 Gb/s

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

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **28** # 1708
Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *See#1753*
10/1GBASE-PRX-U2 ONU 10 Gb/s

*SuggestedRemedy*
Correction: 10/1GBASE-PRX-U2 ONU 1000 Mb/s

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
See comment #1753

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **29** # 1709
Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *See#1753*
10/1GBASE-PRX-D3 OLT 1000 Mb/s

*SuggestedRemedy*
Correction: 10/1GBASE-PRX-D3 OLT 10 Gb/s

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
See comment #1753

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **31** # 2105
Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *3E PROCESSED], See#2105*
Incorrect PMDs are listed in this table

*SuggestedRemedy*
10/1GBASE-PRX-U4 should be 10/1GBASE-PRX-U3
10GBASE-PR-U2 does not exist. Remove the row.

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

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **32** # 1995
Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *3E PROCESSED], See#2105*
Delete non-specified physical layer signaling systems from Table 56.1. Lines 32 and 38.

*SuggestedRemedy*
Delete table row containing "10/1GBASE-PRX-U4".
Delete table row containing "10/1GBASE-PR-U2".

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Resolved in comment #2105

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **32** # 1644
Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A**
Row 17 (inc heading row) of Table 56-1 has a Name value of "10/1GBASE-PRX-U4" this should be "10/1GBASE-PRX-U3"

*SuggestedRemedy*
In row 17 (inc heading row) of Table 56-1, change the Name value from "10/1GBASE-PRX-U4" to "10/1GBASE-PRX-U3" (also fix the height of the row above)

*Response* *Response Status* **C**
ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **32** # 1754
Hirth, Ryan Teknovus

*Comment Type* **E** *Comment Status* **A**
10/1GBASE-PRX-U4 should be 10/1GBASE-PRX-U3

*SuggestedRemedy*
change "U4" to "U3"

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

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **32** # 1710
Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A**
10/1GBASE-PRX-U4 ONU 10 Gb/s

*SuggestedRemedy*
Correction: 10/1GBASE-PRX-U3 ONU 1000 Mb/s

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

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **32** # 1684
Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *See#2105*
in the columne of Name, "10/1GBASE-PRX-U4" does not exist

*SuggestedRemedy*
change to "10/1GBASE-PRX-U3"

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

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **37** # 1985
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *3E PROCESSED], See#1645*
10GBASE-PR-U2: does it exist?

*SuggestedRemedy*
Delete row? Also problem in Table 56-3.

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

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **38** # 1685
Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *3E PROCESSED], See#1645*
In the name column, "10GBASE-PR-U2" does not exist

*SuggestedRemedy*
change to "10GBASE-PR-U1"

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Already resolved in comment #2105

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **38** # 1711
Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *3E PROCESSED], See#1645*
10GBASE-PR-U2 ONU 10 Gb/s

*SuggestedRemedy*
Correction: 10GBASE-PR-U1 ONU 10 Gb/s

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Already resolved in comment #2105

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **38** # 1645
Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*
Row 21 (inc heading row) of Table 56-1 has a Name value of "10GBASE-PR-U2" this should be "10GBASE-PR-U1"

*SuggestedRemedy*
In row 21 (inc heading row) of Table 56-1, change the Name value from "10GBASE-PR-U2" to "10GBASE-PR-U1"

*Response* *Response Status* **C**
ACCEPT.
Moved to c56
Already resolved in comment #2105

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **41** # 1646
Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *See#2107*
Table 56-1 before ammendment by 802.3av contained four rows that are not shown in this draft revision. Since the editing instruction is "Change Table 56-1 as below", this implies deleting the four rows not shown.

*SuggestedRemedy*
show the four extra rows in the current Table 56-1 in normal font including notes b to f

*Response* *Response Status* **C**
ACCEPT.
Moved to c56
See comment #2107

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **43** # 2391

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *See#2107*

The change instructions and this table could be misread as meaning that the rows for 10PASS-TS and 10BASE-TL (see IEEE Std 802.3-2005 page 5) which is not correct.

*SuggestedRemedy*

Make it clear these rows are not to be deleted.

*Response* *Response Status* **C**

ACCEPT.
See #2107

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **46** # 2282

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *See#2106*

Reference to Table 56 is unclear. Change line 40 as suggested in remedy field.
Missing space in line 47 after "Table 56-3"

*SuggestedRemedy*

Change "Table 56 specifies the correlation" to "Table 56-2 specifies the correlation". Make sure link to "Table 56-2" is a live cross-reference.
Change "while Table 56-3specifies " to "while Table 56-3 specifies ". Make sure link to "Table 56-3" is a live cross-reference.

*Response* *Response Status* **C**

ACCEPT.
See #2106

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **46** # 1647

Anslow, Peter Nortel Networks

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

The text below Table 56-1 starts "Table 56 specifies the correlation between nomenclature and clauses for P2P systems, while Table 56-3specifies ...". The first Table should be 56-2 and there is a space missing between "Table 56-3" and "specifies"

*SuggestedRemedy*

Change the text below Table 56-1 to start "Table 56-2 specifies the correlation between nomenclature and clauses for P2P systems, while Table 56-3 specifies ...".

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **46** # 1713

Lin, Rujian Shanghai Luster Terab

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

Table 56 specifies.....

*SuggestedRemedy*

Table 56-2 specifies.....

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **46** # 1763

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *See#2006*

"while Table 56-3specifies" needs a space.

*SuggestedRemedy*

"while Table 56-3 specifies"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **46** # 2106

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *See#2106*

"Table 56 specifies the correlation between nomenclature and clauses for P2P systems, while Table 56-3 specifies the correlation between nomenclature and clauses for P2MP systems."

There is no table 56

*SuggestedRemedy*

Use "Table 56-2 specifies the correlation between nomenclature and clauses for P2P systems, while Table 56-3 specifies the correlation between nomenclature and clauses for P2MP systems."

Insert space after 56-3

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **47** # 2006

Frazier, Howard Broadcom

*Comment Type* **E** *Comment Status* **A** *See#2006*

missing space in "Table 56-3specifies".

*SuggestedRemedy*

insert a space

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **47** # 2165

Bennett, Michael LBNL

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

Table 56-3specifies ... needs a space inserted between the "3" and "s"

*SuggestedRemedy*

replace with the follwing text

Table 56-3 specifies

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **40** *L* **6** # 1809

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

the "@" signs in the table

*SuggestedRemedy*

delete @'s

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* # 2390

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

100BASE-LX10 and 1000BASE-LX10 are both footnoted as 'Symmetric' yet the 10GBASE-PR PHYs, which subclause 75.2.1.2 defines as Symmetric, is not so footnoted - this is confusing.

Further in Clause 65 of IEEE Std 802.3-2005 it is stated that 'The architecture is asymmetrical, based on a tree and branch topology utilizing passive optical splitters.', so if the PON architecture is asymmetric it is odd to have 75.2.1.2 define 'Symmetric, 10Gb/s power budgets (PR type).

This confusion is being caused by a lack of clarity between symmetric (P2P) and asymmetric (PON) architectures and symmetric (10GBASE-PR) and asymmetric (10/1GBASE-PRX) data rate PHYs which operate on an asymmetric architectures.

*SuggestedRemedy*

One option would be to remove the use of the term asymmetric architecture from Clause 64 and 65 - for example Clause 56 doesn't use that terminology in relation to PONs - then all is required is another annotation for this table.

If if symmetric and asymmetric is still going to be used in both meanings qualify the new use with the words 'data rate'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment #1980
Terms will be replace in open clauses.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* # 2423

DIAB, WAEL BROADCOM

*Comment Type* **TR** *Comment Status* **A** *See#2283*

Tale 56-3 has incorrect PMD names for 10GBASE PMDs

*SuggestedRemedy*

Change PX to PR

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See #2283

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **1** # 1580

Anslow, Peter Nortel Networks

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

Editing instruction starts with a dot

*SuggestedRemedy*

Remove leading dot so ".Insert" becomes "Insert"

*Response* *Response Status* **C**

ACCEPT.
Moved to c56

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **10** # 1756

Hirth, Ryan Teknovus

*Comment Type* **E** *Comment Status* **A** *See#2415*

in column 77 "10G-EPN P2MP MPMCS" should read "10G-EP0N P2MP MPMC"

*SuggestedRemedy*

change "10G-EPN P2MP MPMCS" to "10G-EP0N P2MP MPMC"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **10** # 2364

Law, David 3Com

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

Add PMD to the end of the header text in all the columns from 10/1GBASE-PRX-D1 through to 10GBASE-PR-U3.

*SuggestedRemedy*

Change '10/1GBASE-PRX-D1' to read '10/1GBASE-PRX-D1 PMD'.
Add 'PMD' to end of all other column headings.
To '10GBASE-PR-U3' to read '10GBASE-PR-U3 PMD'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **11** # 1996

Brown, Alan Wave7 Optics, Inc.

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

Missing comma.

*SuggestedRemedy*

Add comma as in "PMA, FEC".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **15** # 1764

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *See#2006*

"10G-EPN" is not defined abbreviation.

*SuggestedRemedy*

"10G-EPON"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **31** # 1755

Hirth, Ryan Teknovus

*Comment Type* **E** *Comment Status* **A** *See#2283*

10GBASE-PX PHYs in table should read 10GBASE-PR.

*SuggestedRemedy*

change 10GBASE-PX-D1 to 10GBASE-PR-D1.
change 10GBASE-PX-D2 to 10GBASE-PR-D2.
change 10GBASE-PX-D3 to 10GBASE-PR-D3.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2283

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **32** # 1648

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *See#2283*

In Table 56-3 there are rows for "10GBASE-PX-D1", "10GBASE-PX-D2" and "10GBASE-PX-D3" which should be "10GBASE-PR-D1", "10GBASE-PR-D2" and "10GBASE-PR-D3"

*SuggestedRemedy*

In Table 56-3 change "10GBASE-PX-D1", "10GBASE-PX-D2" and "10GBASE-PX-D3" to "10GBASE-PR-D1", "10GBASE-PR-D2" and "10GBASE-PR-D3"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c56
See comment #2283

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **32** # 2283

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *3E PROCESSED], See#2283*

Incorrect PMD names in Table 56-3 i.e.
10GBASE-PX-D1
10GBASE-PX-D2
10GBASE-PX-D3
Use the final format of Table 56-3 as provided in 3av_0809_hajduczenia_3.pdf

*SuggestedRemedy*

Change
10GBASE-PX-D1 > 10GBASE-PR-D1
10GBASE-PX-D2 > 10GBASE-PR-D2
10GBASE-PX-D3 > 10GBASE-PR-D3
Use the final format of Table 56-3 as provided in 3av_0809_hajduczenia_3.pdf

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Make suggested correctiong to PMD names in 1st column.
Collapse all PMDs under c75 into a single column with "M" as appropriate.

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **36** # 1649

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *See#2283*

In Table 56-3 there is a row for "10GBASE-PR-U2" which does not exist.

*SuggestedRemedy*

Remove the row for "10GBASE-PR-U2"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c56
See comment #2283

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **37** # 1650

Anslow, Peter Nortel Networks

*Comment Type* **TR** *Comment Status* **A** *3E PROCESSED], See#2283*

In Table 56-3 the row for "10GBASE-PX-D3" (which should be "10GBASE-PR-D3") contains an "M" against the column "10GBASE-PR-U3" whereas the M should be one column to the left for "10GBASE-PR-D3"

*SuggestedRemedy*

Move the "M" in row 15 of Table 56-3 (not including headings) to the column for "10GBASE-PR-D3"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Was "ER" changed to "TR"
Moved to c56
Resolved in comment #2283

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **38** # 1686

Jessica, Jiang Salira

*Comment Type* **E** *Comment Status* **A** *See#2283*

In table 56-3,
1) in nameenclature column, 10GBASE-PX-D1,2,3 should be 10GBASE-PR-D1,2,3
2) 10GBASE-PR-U2 does not exist
3) the last two rows, the "M"s also need to modified.

*SuggestedRemedy*

1) change "10GBASE-PX-D1,2,3" to "10GBASE-PR-D1,2,3"
2) delete the row of "10GBASE-PR-U2", i.e., the 3rd row from the bottom
3) adjust the middle "M" for the last two rows.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2283

*Cl* **56** *SC* **56.1.3** *P* **42** *L* **39** # 1651

Anslow, Peter Nortel Networks

*Comment Type* **TR** *Comment Status* **A** *3E PROCESSED], See#2283*

In Table 56-3 the row for "10GBASE-PR-U3" does not contain an "M" against the column "10GBASE-PR-U3" which it should.

*SuggestedRemedy*

Place an "M" in row 16 of Table 56-3 (not including headings) for "10GBASE-PR-U3" in the column for "10GBASE-PR-U3"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c56
Changed from "ER" to "TR"
See comment #2283

*Cl* **56** *SC* **56-1** *P* **35** *L* **1** # 1806

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*

inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **56** *SC* **56-1** *P* **36** *L* **1** # 1807

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*

inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **56** *SC* **56-1** *P* **37** *L* **1** # 1808

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*

inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **56** *SC* **Table 56-3** *P* **42** *L* # 2415

DIAB, WAEL BROADCOM

*Comment Type* **E** *Comment Status* **A** *See#2415*

EPON is not spelled correctly in the last column

*SuggestedRemedy*

Please fix spelling

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **4.2.1** *P* **44** *L* **40** # 2173

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **R**

first paragraph of 66.4.2.1 appears as though it should be formatted as an editorial remark

*SuggestedRemedy*

reformat this paragraph

*Response* *Response Status* **C**

REJECT.
Note to the commentor that the full subclause should be placed in the comment tool. This paragraph is consistent with other subclauses of Clause 66.

*Cl* **66** *SC* **4.2.1** *P* **NA** *L* **44** # 2186

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

This paragraph describes an extension of the local fault and remote fault behavior with and without a unidirectional capability. In the bi-directional case, it appears to eliminate any difference between the behavior under local or remote fault conditions, issuing IDLE characters in both cases.

*SuggestedRemedy*

Verify whether the behavior of the bi-directional PHY under conditions of local and remote fault are as desired. Consider including a diagram.

*Response* *Response Status* **C**

REJECT.
The P2MP nature of the PON makes the existing RF and LF mechanism somewhat useless. The change for 10G-EPON prevents RF from being sourced by either the OLT or the ONU. No change is necessary to the draft.

*Cl* **66** *SC* **4.2.3** *P* **NA** *L* **20** # 2187

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **A** *Duplicate 1663*

The behavior in case '(b)' of this section is inconsistent with that described in 66.4.2.1. There also seems to be an editorial error -- the phrase 'idle control characters' seems like it should be deleted to make the inserted text sensible. If this is done, case (c) on line 27 is now consistent with case (b), but remains inconsistent with 66.4.2.1.

*SuggestedRemedy*

Clarify case (b), and harmonize this section with 66.4.2.1. It seems like this section is the correct one with the edit suggested above. Also consider a diagram indicating desired behavior for local / remote fault in the uni-directional and bi-directional case.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment 1663.

*Cl* **66** *SC* **5.4.5** *P* **NA** *L* **4** # 2188

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

There is a table in this section without a table number. Also, the table describes identical bi-directional link behvaior under local fault and remote fault conditions,(cases PF4 and PF5). Is this correct?

*SuggestedRemedy*

Number the table, and make changes to PF4 and PF7 entries so that bi-directional links can distinguish a local fault from a remote fault.

*Response* *Response Status* **C**

REJECT.
PICS does not have table number. Behavior is correct.

*Cl* **66** *SC* **66.3.1** *P* **44** *L* **17** # 1668

Marris, Arthur Cadence

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

Spelling insertign

*SuggestedRemedy*

inserting

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.3.1** *P* **44** *L* **18** # 1581

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Duplicate 1668*

Editing instruction contains word "insertign" which should be "inserting"

*SuggestedRemedy*

change "insertign" to "inserting"

*Response* *Response Status* **C**

ACCEPT.
Moved to c66
See response to comment 1668.

*Cl* **66** *SC* **66.4** *P* **44** *L* **21** # 1986

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

This is really confusing. If 66.4 is all new for 10G-EPON, put it in 76.1, RS for 10GE-EPON. not 66. Also, what's the difference between this and 66.3?

*SuggestedRemedy*

Move to 76.1. Add an informative NOTE in 66.3 pointing out that 10G RS for P2MP is different, referring to this. Add a NOTE in this saying that when link_fault = Local Fault, while 66.3 allows unidirectional transmission of frames in RF, 10G-EPON requires idles, optionally with unidirectional transmission of frames in idles. (if that is the case!)

*Response* *Response Status* **C**

REJECT.
Clause 66 is a relatively short clause that only deals with extensions necessary for unidirectional support. Even extensions required by Clause 65 EPON are stated here. This seems to be the most convenient location for 10G-EPON, too.

*Cl* **66** *SC* **66.4.2.1** *P* **44** *L* **31** # 1669

Marris, Arthur Cadence

*Comment Type* **T** *Comment Status* **A** *Duplicate 1663*

It is not clear what is being changed in 802.3av. It seems that idle is now sent instead of remote fault on local fault which does not seem right.

*SuggestedRemedy*

Redraft this subclause so it is understandable.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment 1663.

*Cl* **66** *SC* **66.4.2.1** *P* **44** *L* **45** # 1582

Anslow, Peter Nortel Networks

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

The text says "The nature of the P2MP allows for some of these fault conditions to be ignored."
This would read better as:
"The nature of the P2MP link allows for some of these fault conditions to be ignored."

*SuggestedRemedy*

change "The nature of the P2MP allows" to "The nature of the P2MP link allows"

*Response* *Response Status* **C**

ACCEPT.
Moved to c66

*Cl* **66** *SC* **66.4.2.3** *P* **45** *L* **21** # 1670

Marris, Arthur Cadence

*Comment Type* **T** *Comment Status* **A** *Duplicate 1663*

b) Idle control characters not umder-lined. Remote fault not struck through.

*SuggestedRemedy*

As above

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment 1663.

*Cl* **66** *SC* **66.4.2.3** *P* **45** *L* **21** # 2025

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *Duplicate 1663*

The words "Remote Fault Sequence ordered_sets" should appear with strikethroughs.

*SuggestedRemedy*

strikethrough the offending words

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment 1663.

*Cl* **66** *SC* **66.4.2.3** *P* **45** *L* **21** # 1663

Anslow, Peter Nortel Networks

*Comment Type* **TR** *Comment Status* **A** *ROCESSED], Duplicate 1663*

option b) starts:
"link_fault = Local Fault
If unidirectional_enable = FALSE, the RS shall continuously generate Idle control characters Remote Fault Sequence ordered_sets."
which does not make sense.

*SuggestedRemedy*

show "Idle control characters" in underline font and "Remote Fault Sequence ordered_sets" in strikeout font rather than underline

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.4.2.3** *P* **45** *L* **21** # 1987

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *Duplicate 1663*

"RS shall continuously generate Idle control characters Remote Fault Sequence ordered_sets."

*SuggestedRemedy*

Which is it? Idles or RF?

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See response to comment 1663.

*Cl* **66** *SC* **66.4.2.3** *P* **45** *L* **27** # 1583

Anslow, Peter Nortel Networks

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

option c) starts:
"llink_fault = Remote Fault
If unidirectional_enable = FALSE,"
but "If unidirectional_enable = FALSE," was not part of clause 46.3.4.3

*SuggestedRemedy*

show "If unidirectional_enable = FALSE," in underline font

*Response* *Response Status* **C**

ACCEPT.
Moved to c66

*Cl* **66** *SC* **66.5** *P* **45** *L* **42** # 1803

Flatman, Alan LAN Technologies

*Comment Type* **E** *Comment Status* **A** *Duplicate 2071*

Typo (operaiont)

*SuggestedRemedy*

Change to "operation".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.5** *P* **45** *L* **42** # 2284

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *Duplicate 2071*

Incorrect speed designation in item XP2MP
Is "10 Gp/s" should be "10 Gb/s"

*SuggestedRemedy*

Is "10 Gp/s" should be "10 Gb/s"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.5** *P* **45** *L* **43** # 2007

Frazier, Howard Broadcom

*Comment Type* **E** *Comment Status* **A** *Duplicate 2071*

spelling mistake "operaiont" in "Feature" column.

*SuggestedRemedy*

ficks speling.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.5** *P* **45** *L* **43** # 2071

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *Duplicate 2071*

Typos

"10 Gp/s P2MP operaiont"

*SuggestedRemedy*

Change
1) Gp/s --> Gb/s
2) operaiont --> operation

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.5.3** *P* **45** *L* **42** # 1584

Anslow, Peter Nortel Networks

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

The feature column contains "10 Gp/s P2MP operaiont" and the Subclause column contains "66"

*SuggestedRemedy*

Change feature to "10 Gb/s P2MP operation" change Subclause to "66.4"

*Response* *Response Status* **C**

ACCEPT.
Moved to c66

*Cl* **66** *SC* **66.5.3** *P* **45** *L* **42** # 2260
Chalupsky, David Intel Corp.

*Comment Type* **E** *Comment Status* **A** *Duplicate 2071*

typo "operaiont"

*SuggestedRemedy*

change to "operation"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **66** *SC* **66.5.4.5** *P* **46** *L* **6** # 2285
Hajduczenia, Marek Nokia Siemens Networ

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

Lines 6 - 7 are affected.
In item PF2, reference is made to 10 Gb/s P2MP RS, which references to Clause 46. It is incorrect, since 10 Gb/s P2MP RS is a new RS, defined in Clause 76.

*SuggestedRemedy*

Change Value/Comment for item PF1 to read "See Clause 76".
Make sure link to "Clause 76" is a live cross-reference

*Response* *Response Status* **C**

ACCEPT.

*Cl* **67** *SC* **67** *P* **47** *L* **19** # 2072
Kramer, Glen Teknovus, Inc.

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

grammar

*SuggestedRemedy*

Insert "in" after "and"

*Response* *Response Status* **C**

ACCEPT.
[Subclause was added]

*Cl* **67** *SC* **67.6.3** *P* **46** *L* **15** # 2155
Remein, Duane Alcatel-Lucent

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Format of editing instructions inconsistent with other clauses.

*SuggestedRemedy*

Align format with other clauses.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75** *P* **49** *L* **1** # 1927
Dawe, Piers Avago

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

Most multi-clause projects are ordered DOWN the layer stack: MAC then RS the PCS and so on. This draft orders the three or four sublayers in 76 from top down also.

*SuggestedRemedy*

Swap Clause 77 with Clause 75

*Response* *Response Status* **C**

REJECT.
[Line number was fixed]
Clause order was modelled after 1G EPON. In 802.3ayD2.2 clauses are ordered as follows:
Clause 60: PMD
Clause 64: MACC
Clause 65: RS, PCS and PMA
In 10GEPON 802.3av, clauses are order as follows:
Clause 75: PMD
Clause 76: PCS, PMA and RS
Clause 77: MACC
Which seems to follow bottom - up logic.

*Cl* **75** *SC* **75** *P* **49** *L* **1** # 1928
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Title is FAR too long. One should try to keep the title so that it is just one line long in the contents All PONs are long wavelength. All PONs are asymmetric. Is the medium part of the PMD sublayer? Titles don't have to explain: compare Clause 68.

*SuggestedRemedy*

Physical Medium Dependent (PMD) sublayer, type 10GBASE-PR and 10/1GBASE-PRX or PMD sublayer and medium, type 10GBASE-PR and 10/1GBASE-PRX or PMD sublayer, type 10GBASE-PR and 10/1GBASE-PRX Make appropriate changes to 75.12, 75.12.1, 75.12.2.2.and 75.12.4

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change title of C75 to "Physical Medium Dependent (PMD) sublayer and medium for passive optical networks, type 10GBASE-PR and 10/1GBASE-PRX"
Make appropriate changes to 75.12, 75.12.1, 75.12.2.2.and 75.12.4.

*Cl* **75** *SC* **75.1** *P* **49** *L* **48** # 1587

Anslow, Peter Nortel Networks

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

The abbreviation EPON is not in the list of abbreviations

*SuggestedRemedy*

Add EPON to the list of abbreviations

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add a new entry in C01/1.5 with the following contents "EPON Ethernet Passive Optical Networks". Align with the style used in C01/1.5.

*Cl* **75** *SC* **75.1.1** *P* **49** *L* **48** # 2008

Frazier, Howard Broadcom

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

This paragraph would benefit from a sprinkling of definite articles.

*SuggestedRemedy*

Rewrite paragraph as follows:

EPONs operate over a point-to-multipoint (P2MP) topology, also called a tree or trunk-and-branch topology. The device connected at the root of the tree is called an Optical Line Terminal (OLT) and the devices connected as the leaves are referred to as Optical network Units (ONUs). The direction of transmission from the OLT to the ONUs is referred to as the downstream direction, while the direction of transmission from the ONUs to the OLT is referred to as the
upstream direction.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.1.1** *P* **49** *L* **50** # 1765

KIMURA, Mitsunobu Hitachi Communicatio

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

"Optical network Unit (ONU)" of "network" shoule be "Network".

*SuggestedRemedy*

"Optical Network Unit (ONU)"

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **75** *SC* **75.1.3** *P* **50** *L* **17** # 2189

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Optical performance specifications (see also sections 75.4 and 75.5) seem pretty aggressive for several of the PHY types. I have not made a careful study of it, but it seems like only one of the receiver sensitivity specifications in Table 75-6, 75-7, and 75-8 can be met with a PIN detector, with the others requiring an APD. However, I can see that power budgets (OLT and ONU launch and receive levels) have been carefully designed so that PR-10, PR-20 and PRX-10, PRX-20 classes could be met with the PIN ONU receiver. So it seems that a lot of thought went into these power budget classes. I think more clarifying information about these would be appropriate, and this section or 75.4 / 75.5 would be the place to put it.

*SuggestedRemedy*

Provide additional explanatory materials on the 3 power budget classes and intended use.

*Response* *Response Status* **C**

REJECT.
[Subclause number was fixed]
[Page number was fixed]
PMD intended application is already described in 75.1.3. It is not the purpose of this document to provide explanatory materials on applications of individual PMDs or their design process.

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **30** # 2395

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], joint*

Is it correct that 'PRX-type power budgets are also called asymmetric.', I didn't think it was the power budget that was asymmetric, I though it was the data rate that was asymmetric - for example 56.1.3 (page 39, line 19) states '.. PRX10 power budget, with asymmetric 10 Gb/s downstream and 1 Gb/s upstream data rates ..'.

Further Table 75-1 'Power budgets defined in Clause 75' doesn't differentiate between -U PHYs and -D PHYs as far as I can see so the budgets are all symmetric.

*SuggestedRemedy*

On line 30 delete the text 'PRX-type power budgets are also called asymmetric.', on line 32 'PR-type power budgets are also called symmetric.' , on line 38, 40 and 42 'asymmetric,', on line 43, 45 and 47 'symmetric,'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Subclause 75.1.4, modify blocks of text as shown below:

PRX-type power budget describes asymmetric-rate PHY for PON operating at 10 Gb/s downstream and 1 Gb/s upstream over a single SMF (see objective b.1 above).
PR-type power budget describes symmetric-rate PHY for PON operating at 10 Gb/s downstream and 10 Gb/s upstream over a single SMF (see objective b.2 above).

PRX10 - asymmetric-rate, low power budget, compatible with PX10 power budget defined in @@Clause 60@@;
PRX20 - asymmetric-rate, medium power budget, compatible with PX20 power budget defined in @@Clause 60@@;
PRX30 - asymmetric-rate, high power budget;
PR10 - symmetric-rate, low power budget, compatible with PX10 power budget defined in @@Clause 60@@;
PR20 - symmetric-rate, medium power budget, compatible with PX10 power budget defined in @@Clause 60@@;
PR30 - symmetric-rate, high power budget;

Editor will do a search for other location referring to asymmetric / symmetric power budgets and present the results at November meeting.

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **37** # 2073

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *bullets in 75.1.4*

Align bullets in the bulleted list

*SuggestedRemedy*

see above

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **38** # 1585

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *bullets in 75.1.4*

The bullets at the bottom of page 50 do not line up with each other suggesting that some are sub-bullets

*SuggestedRemedy*

Align the bullets

*Response* *Response Status* **C**

ACCEPT.
See comment #2073

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **38** # 2286

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *bullets in 75.1.4*

Lines 38-47 are affected. The bullets are not aligned correctly - align them.

*SuggestedRemedy*

Align the individual bullets in lines 38-47.

*Response* *Response Status* **C**

ACCEPT.
See comment #2073

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **45** # 2026

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *PR20 - PX20*

"PX10" s/b "PX20".

*SuggestedRemedy*

change as suggested in comment.

*Response* *Response Status* **U**

ACCEPT.
See comment #1586

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **45** # 1714

Lin, Rujian Shanghai Luster Terab

*Comment Type* **T** *Comment Status* **A** *PR20 - PX20*

PX10 power budget

*SuggestedRemedy*

Correction: PX20 power budget

*Response* *Response Status* **C**

ACCEPT.
[Changed from "E" to "T"]

*Cl* **75** *SC* **75.1.4** *P* **50** *L* **45** # 1586

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *PROCESSED], PR20 - PX20*

The fifth bullet says "PR20 - symmetric, medium power budget, compatible with PX10 power budget defined in @@Clause 60@@;"
shouldn't this be "compatible with PX20 power budget"?

*SuggestedRemedy*

Change the fifth bullet to "PR20 - symmetric, medium power budget, compatible with PX20 power budget defined in Clause 60;"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "E" to "T"]
See resolution of comment #2395.

*Cl* **75** *SC* **75.1.4** *P* **51** *L* **16** # 2158

Effenberger, Frank Huawei Technologies,

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], joint*

This comment concerns the downstream wavelength for the PR10, PR20, PRX10, and PRX20 PMDs, which is currently specified at 1580 to 1600nm. When this was selected, it was thought that it would enable cheaper transmitters. However, there are a couple of issues that argue against this wavelength choice:
1. The 1590nm sources seem to be less available than the 1577nm sources, so any cost savings due to the wider window will be cancelled out by this effect.
2. The use of wavelengths beyond 1580nm has become increasingly uncertain, since the fibers and couplers are not fully specified at those wavelengths.

We should also consider that if we use a single downstream wavelength for all PMD types, then early volumes will be increased and the manufacturing community will be given a clearer message on what wavelength sources to build.

*SuggestedRemedy*

Change the downstream wavelength range for all PMD types to 1574 to 1580nm.
This occurs in Table 75-1, 75-5, 75-11, 75-12, 75-13, and 75-20, and throughout section 75.6.1.1.

*Response* *Response Status* **C**

ACCEPT.

I approve the resolution suggested in the comment:
Yes: 10
No: 0
Abstain: 15

[Accepted]

[COME BACK, review ad-hoc material and revisit]
If accepted, this change will affect Clause 75 draft in a number of places: Table 75-1, 75-5, 75-11, 75-12, 75-13, and 75-20, and throughout section 75.6.1.1. Align figures where necessary e.g. Figure 75-8.
Verify remaining clauses if any other updates are not required.

*Cl* **75** *SC* **75.1.4** *P* **51** *L* **24** # 2027

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

What does a minimum reach of less than or equal to 0.5 m mean? Zero meters is less than 0.5, so is zero meters allowed? If 0.5 m is really the minimum, then the less than or equal sign should be removed. If zero meters is allowable, then the minimum should be zero meters.

*SuggestedRemedy*

Pick one, either 0.5 m or 0 m, as the minimum reach.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

In Table 75-1, change "Minimum reach" to read "0.5".

---

*Cl* **75** *SC* **75.1.4** *P* **51** *L* **4** # 2365

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

This is Clause 75.

*SuggestedRemedy*

Change the text 'Power budgets defined in Clause 75' to read 'Power budgets'.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **75** *SC* **75.1.4** *P* **82** *L* **1** # 2174

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **A** *Fibre type standards*

Table 75-1 does not reference what B.1.1 , B.1.3 Fiber types are.

*SuggestedRemedy*

Add reference to ITU documents, as in Table 75-20, or perhaps reference Table 75-20.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "E" to "T"]
[Subclause number was fixed]
[Page number was added]
See comment #1805

---

*Cl* **75** *SC* **75.10.1** *P* **80** *L* **30** # 1660

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

This says "The 10GBASE-PR and 10/1GBASE-PRX environmental specifications are as defined in @@Subclause 52.10.1@@ for general safety, and as defined in @@Subclause 52.10.2@@ for laser safety."
Subclause 52.10.1 says "All equipment meeting this standard shall conform to IEC-60950:1991." This reference is ridiculously out of date. IEC-60950 has been superseded by IEC 60950-1.
Subclause 52.10.2 only refers to IEC 60825-1 (Safety of Laser Products-Part 1: Equipment classification and requirements.) and not to the much more relevant (and much easier to understand) IEC 60825-2 (Safety of laser products-Part 2: Safety of optical fibre communication systems OFCS)

*SuggestedRemedy*

Replace 75.10.1 with:
75.10.1 General safety
All equipment subject to this clause shall conform to IEC 60950-1.
75.10.2 Laser safety
100GBASE-LR4 and 100GBASE-ER4 optical transceivers shall conform to Class 1 laser requirements as defined in IEC 60825-1 and IEC 60825-2, under any condition of operation. This includes single fault conditions whether coupled into a fiber or out of an open bore.
Conformance to additional laser safety standards may be required for operation within specific geographic regions.
Laser safety standards and regulations require that the manufacturer of a laser product provide information about the product's laser, safety features, labeling, use, maintenance, and service. This documentation explicitly defines requirements and usage restrictions on the host system necessary to meet these safety certifications.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

10GBASE-PR and 10/1GBASE-PRX is probably references in new 75.10.2 (?)

Replace 75.10.1 with:
75.10.1 General safety
All equipment subject to this clause shall conform to IEC 60950-1.

Insert 75.10.2
75.10.2 Laser safety
10GBASE-PR and 10/1GBASE-PRX optical transceivers shall conform to Class 1 laser requirements as defined in IEC 60825-1 and IEC 60825-2, under any condition of operation. This includes single fault conditions whether coupled into a fiber or out of an open bore.
Conformance to additional laser safety standards may be required for operation within specific geographic regions.
Laser safety standards and regulations require that the manufacturer of a laser product provide information about the product's laser, safety features, labeling, use, maintenance, and service. This documentation explicitly defines requirements and usage restrictions on

the host system necessary to meet these safety certifications.

Renumber the remaining subclauses in 75.10 as necessary. Update all hyperlinks in C75 and remaining Clauses.

---

*Cl* **75** *SC* **75.10.3** *P* **80** *L* **44** # 1610

Anslow, Peter Nortel Networks

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

The second paragraph starts: "Reference @@Annex 67A@@ for additional environmental information." which is unclear.

*SuggestedRemedy*

Change to "See Annex 67A for additional environmental information."

*Response* *Response Status* **C**

ACCEPT.
Mark external reference as appropriate.

---

*Cl* **75** *SC* **75.11.1** *P* **81** *L* **22** # 1934

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *ANSI/TIA/EIA-526-7*

We should reference international standards where available. Is there is an ITU-T equivalent to ANSI/TIA/EIA-526-7 [B15], method A-1?

*SuggestedRemedy*

If so, reference the ITU-T equivalent, add to 1.3 if not present, and if you are good citizens, change any other clauses that use this

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1804

---

*Cl* **75** *SC* **75.11.1** *P* **81** *L* **22** # 1804

Flatman, Alan LAN Technologies

*Comment Type* **T** *Comment Status* **A** *ESSED], ANSI/TIA/EIA-526-7*

Quote International standard for insertion loss measurement.

*SuggestedRemedy*

Specify IEC 61280-4-2:2000 (fibre optic communication subsystem basic test procedures; fibre optic cable plant; single-mode fibre optic cable plant attenuation) instead of ANSI/TIA/EIA-526-7.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

--- 19.08.2008 ---

Add a new normative reference with the contents "Insertion loss measurements of installed fiber cables are made in accordance with IEC 61280-4-2:2000 [xx]". Replace [xx] with the next free number in the list of references.

Update the reference in 75.11.1 reading "ANSI/TIA/EIA–526–7 [B15], method A–1" to "IEC 61280-4-2:2000 [xx]". [xx] will be replaced with the next free number in the list of references.

Add a new Normative Reference in C01/1.3 with the following contents "IEC 61280-4-2:2000, Fibre optic communication subsystem basic test procedures; Fibre optic cable plant; Single-mode fibre optic cable plant attenuation"

---

*Cl* **75** *SC* **75.11.2** *P* **81** *L* **29** # 2164

Swanson, Steve Corning

*Comment Type* **TR** *Comment Status* **A** *ESSED], Fibre type standards*

Specify low-water peak single-mode fiber ITU standard per G.652D and specify the bend-insensitive single-mode fiber ITU standard per G.657.

*SuggestedRemedy*

SuggestedRemedy: reference to "ITU G.657" as an acceptable fiber optic cable specification in this subclause.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1805

*Cl* **75** *SC* **75.11.2** *P* **81** *L* **29** # 1805

Coleman, Doug Corning

*Comment Type* **TR** *Comment Status* **A** *:SSED], Fibre type standards*

Need to specify the low-water peak single-mode fiber ITU standard. Also, need to specify the bend-insensitive single-mode fiber ITU standard.

*SuggestedRemedy*

ITU G.652 should be changed to ITU G.652.D, and ITU G.657 should be included as an acceptable fiber optic cable specification in this subclause.'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change
"The fiber optic cable requirements are satisfied by the fibers specified in IEC 60793-2 Type B1.1 (dispersion un-shifted SMF) and Type B1.3 (low water peak SMF) and ITU G.652 as noted in Table 75-20."
to
"The fiber optic cable requirements are satisfied by the fibers specified in IEC 60793-2 Type B1.1 (dispersion un-shifted SMF) and Type B1.3 (low water peak SMF), ITU-T G.652 and ITU-T G.657 (bend-insensitive SMF), as noted in Table 75-20."

Add a new Normative Reference in C01/1.3 with the following contents "ITU-T Recommendation G.675, 2006-Characteristics of a bending loss insensitive single mode optical fibre and cable for the access network". Format as appropriate

Change the entry for G.652 in C01/1.3 to read as follows: "ITU-T Recommendation G.652, 2005-Characteristics of a single-mode optical fibre and cable". Format as appropriate. Maintain footnote 13.

Change the contents of row "Fibre type" in Table 75-1, 75-12 and 75-13 to read "IEC 60793-2 B1.1, B1.3 SMF<newline>ITU-T G.652, G.675 SMF"

Change the contents of row "Description" in Table 75-20 to read "IEC 60793-2 B1.1, B1.3 SMF<newline>ITU-T G.652, G.675 SMF"

*Cl* **75** *SC* **75.11.2** *P* **82** *L* **18** # 1657

Anslow, Peter Nortel Networks

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

Table 75-20 footnote c contains "calculated using spectral attenuation modelling method (5.4.4) included in G.650.1 (06/2004) and the matrix coefficients included in Appendix III herein" but the 802.3av draft does not contain an Appendix III

*SuggestedRemedy*

change to "calculated using spectral attenuation modelling method (5.4.4) included in G.650.1 (06/2004) and the matrix coefficients included in Appendix III therein"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
change to "calculated using spectral attenuation modelling method (5.4.4) included in ITU-T G.650.1 (06/2004) and the matrix coefficients included in Appendix III therein"
Verify that all references to ITU-T G.xxx series recommendations in the whole draft include proper format i.e. "ITU-T G.xxx".

*Cl* **75** *SC* **75.11.3** *P* **82** *L* **31** # 1658

Anslow, Peter Nortel Networks

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

Reference is made to "(G.671 am 1)" but G.671 is not in the references

*SuggestedRemedy*

Add G.671 to the references

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the text from "(G.671 am 1)" to "(ITU-T G.671 am 1)"

Add a new normative reference in C01/1.3 with the following contents "ITU-T Recommendation G.671 am 1, 2006-Transmission characteristics of optical components and subsystems, Amendment 1"

*Cl* **75** *SC* **75.11.3** *P* **82** *L* **35** # 1819

Dudek, Mike JDSU

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

Decreasing the split ratio while increasing the fiber length is not supported by the other specifications. Excess chromatic dispersion in long lengths could occur and is not covered by the optical budget (eg a split ratio of 2:1 could allow 60km of fiber)

*SuggestedRemedy*

Remove "or vice versa" on line 35, and change the sentence before to "The only requirements are that the resulting channel insertion loss is with the limits specified in Table 75-1 and the maximum reach in table 75-1 is not exceeded" and remove the > or = in table 75-1. Alternatively introduce an abolute maximum chromatic dispersion limit for the fiber connection, and use this maximum chromatic dispersion in the TDP tests.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Remove "or vice versa" on line 35 and change the sentence before to "The only requirements are that the resulting channel insertion loss is with the limits specified in Table 75-1 and the maximum reach in table 75-1 is not exceeded" and remove the > or = in table 75-1.

*Cl* **75** *SC* **75.12** *P* **83** *L* **1** # 2018

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *ESSED], Hidden shall in 75.7*

I cannot find a PICS entry corresponding to the damage threshold requirement stated in 75.7.

*SuggestedRemedy*

Add an appropriate PICS entry for this shall statement.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "ER" to "TR"]
See comment #1599

*Cl* **75** *SC* **75.12.4** *P* **86** *L* **2** # 2080

Kramer, Glen Teknovus, Inc.

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

Page break in the middle of the title

*SuggestedRemedy*

Remove the page break.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.12.4.1** *P* **87** *L* **19** # 1611

Anslow, Peter Nortel Networks

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

FN5 to FN8 are:
FN5 Signal detect function
FN6 Signal detect parameter
FN7 Signal detect function
FN7 Signal detect function
FN8 Signal detect parameter

1) these would be easier to understand if ONU and OLT were added
2) FN7 appears twice

*SuggestedRemedy*

Change to:
FN5 ONU signal detect function
FN6 ONU signal detect parameter
FN7 OLT signal detect function
FN8 OLT signal detect function
FN9 OLT signal detect parameter

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.12.4.13** *P* **92** *L* **1** # 1935

Dawe, Piers Avago

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

Make PICS match clause

*SuggestedRemedy*

Change title to "Definitions of optical parameters and measurement methods"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.12.4.13** *P* **92** *L* **6** # 1612

Anslow, Peter Nortel Networks

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

value/comment "2 m to 5 meters in length" is not consistent.

*SuggestedRemedy*

change to "2 m to 5 m in length"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.12.4.15** *P* **93** *L* **23** # 1661

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *OCESSED], PICS IEC-60950*

value/comment is "Conforms to IEC-60950"
IEC-60950 has been superseded by IEC 60950-1.

*SuggestedRemedy*

change to "Conforms to IEC-60950-1"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.12.4.15** *P* **93** *L* **25** # 1662

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *PICS IEC-60950*

value/comment is "Conform to Class 1 laser requirements defined in IEC 60825-1"
This only refers to IEC 60825-1 (Safety of Laser Products-Part 1: Equipment classification and requirements.) and not to the much more relevant (and much easier to understand) IEC 60825-2 (Safety of laser products-Part 2: Safety of optical fibre communication systems OFCS)

*SuggestedRemedy*

change to "Conforms to Class 1 laser requirements defined in IEC 60825-1 and IEC 60825-2"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.2** *P* **52** *L* **1** # 1810

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *oint, Figure inconsistencies v*

inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **75** *SC* **75.2** *P* **52** *L* **18** # 2389

Law, David 3Com

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

I believe that the OLT incorporates the MDI.

*SuggestedRemedy*

Show the OLT bracket reaching the Fibre (see Figure 56-2) - need to do this for all OTLs and ONUs figures.

*Response* *Response Status* **C**

ACCEPT.
Applicable to all subclauses in D2.0 - revise figures and extend the brackets to fully incorporate MDI interface at the bottom of the stack

*Cl* **75** *SC* **75.2** *P* **53** *L* **1** # 1811

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *oint, Figure inconsistencies v*

inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **75** *SC* **75.2** *P* **54** *L* **26** # 2287

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *75.2.1 subclause*

In line 26, there is reference to "Clause 75.2.1" in text "shown in Clause 75.2.1 below". It is incorrect - 75.2.1 is a Subclause.
The same is true for line 27 and the text "given in Clause 75.4 and". Change "given in Clause 75.4 and" to "given in Sublause 75.4 and"
The same is true for line 27 and the text "are presented in Clause 75.5"
Change "are presented in Clause 75.5" to "are presented in Subclause 75.5"

*SuggestedRemedy*

Change "shown in Clause 75.2.1 below" to "shown in Subclause 75.2.1 below"
Make sure that the link is live.
Change "given in Clause 75.4 and" to "given in Sublause 75.4 and"
Make sure that the link is live.
Change "are presented in Clause 75.5" to "are presented in Subclause 75.5"
Make sure that the link is live.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "shown in Clause 75.2.1 below" to "shown in 75.2.1 below"
Make sure that the link is live.
Change "given in Clause 75.4 and" to "given in 75.4 and"
Make sure that the link is live.
Change "are presented in Clause 75.5" to "are presented in 75.5"
Make sure that the link is live.

*Cl* **75** *SC* **75.2** *P* **54** *L* **27** # 2357

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *75.2.1 subclause*

75.2.1 is a subclause, not a Clause.

*SuggestedRemedy*

Change 'Clause' to 'subclause' in the following locations:

Page 54, line 27
Page 54, line 28 (twice)

Check for and correct other instances throughout the draft.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2287

*Cl* **75** *SC* **75.2.1** *P* **54** *L* **34** # 2358

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *75.2.1 subclause*

75.2.1 is a subclause, not a section.

*SuggestedRemedy*

Change 'section' to 'subclause' in the following locations:

Page 54, line 35.
Page 60, line 3.
Page 64, line 3.

Check for and correct other instances throughout the draft.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Remove the word 'section' in the following locations:
Page 54, line 35.
Page 60, line 3.
Page 64, line 3.

*Cl* **75** *SC* **75.2.1** *P* **54** *L* **34** # 2359

Law, David 3Com

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

I believe these are termed 'power budget' elsewhere in the draft, not 'end-to-end power budget'.

*SuggestedRemedy*

Check the text 'The end-to-end power budget ..' to read 'The power budget ..'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.2.1.1** *P* **54** *L* **40** # 2074

Kramer, Glen Teknovus, Inc.

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

Text should say "...to achieve the power budgets shown in Table 75-1".
(answers which power budget, not how to achieve them)

*SuggestedRemedy*

remove "as". Same on page 55, line 4.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.3.1** *P* **55** *L* **30** # 2404

Law, David 3Com

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED], joint*

This PMD service interface subclause states that it is an interface '.. between the PMA and PMD entities.' which is supported by the layer diagrams found in 75-1 and 75-2 which shows the PMA interfacing to the PMD.

Subclause 75.3.1.4 therefore can't be correct stating that the PMD_SIGNAL.request is generated by the PCS, it has to be generated by the PMA, although that signal may just be a pass through of a signal generated by the PCS.

Further subclause 76.3.1.1 specifies PMD_SIGNAL.request is an addition to the PMA interface which would seem to again imply that the PMA drives this signal.

*SuggestedRemedy*

Add signals to the PMA interface to correctly carry this signal through. For example 76.3.1.1 defines the signal but there needs to be text in 76.3 to describe the operation of this signal.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
List of applicable changes:
(1) "In the upstream direction, this primitive is generated by the @@Clause 76@@ PCS to turn on and off the transmitter according to the granted time" to "In the upstream direction, this primitive is generated by the Clause 76 PMA to turn on and off the transmitter according to the granted time"
(2) "The @@Clause 76@@ PCS generates this primitive to indicate a change in the value of tx_enable." to "The Clause 76 PMA generates this primitive to indicate a change in the value of tx_enable."
(3) Perform necessary changes in Clause 76 PMA: Add signals to the PMA interface to correctly carry this signal through. For example 76.3.1.1 defines the signal but there needs to be text in 76.3 to describe the operation of this signal. Even though PCS is generating this signal, it needs to be carried through PMA in a transparent manner.

List of changes to Figure 76-9:
(1) Change current PMD_SIGNAL.request to PMA_SIGNAL.request between PCS and PMA
(2) Add signal PMD_SIGNAL.request between PMA and PMD
(3) Add a dotted line inside of the PMA to indicate that signal is a pass-through and no changes are introduced in PMA.

List of changes to 76.3
Change
"In addition to the primitives of Clause 51, the following primitive is defined:
PMD_SIGNAL.request(tx_enable)
This primitive controls PMD emission of light. It is generated by the PCS's data detector (see 75) and the effect of its receipt is defined in 75.3.1.4. This primitive is received from the PCS and passed in timely fashion and without modification to the PMD."
to
"In addition to the primitives of Clause 51, the following primitive is defined:
PMA_SIGNAL.request(tx_enable)
This primitive is mapped to PMD_SIGNAL.request(tx_enable). It is generated by the PCS's data detector. The effect of reception of PMD_SIGNAL.request(tx_enable) is defined in 75.3.1.4."

List of changes "PMD_SIGNAL" to "PMA_SIGNAL"
page 116, line 14
page 117, line 3
page 117, line 7
page 120, line 14
page 123, line 9
page 123, line 47

*Cl* **75** *SC* **75.3.1.1** *P* **55** *L* **44** # 1929

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *:ESSED], PMD delay bounds*

This sentence "An upper bound to the delay through the PMD is required for predictable operation of the MAC Control MPCP operation" is well past its sell-by date. If the fibre path can be tens of kilometres long, the 4 time-quanta or 40 m worth of the PMD is hardly significant. But, isn't there a requirement that the delay through the PMD should not change too rapidly?

*SuggestedRemedy*

Delete the offending sentence (you don't have to replace it with anything; standards don't have to give their reasons). Refer to 76.1.3.2.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change text
"An upper bound to the delay through the PMD is required for predictable operation of the MAC Control MPCP operation. The PMD shall introduce a constant transmit delay of not more than 4 time-quanta and constant receive delay of not more than 4 time-quanta. A description of the overall system delay constraints can be found in @@Subclause 77.3.2.4@@, and the definition for the time_quantum can be found in @@Subclause 77.2.2.1@@."
to
"The PMD shall introduce a constant transmit delay of not more than 4 time_quanta and constant receive delay of not more than 4 time_quanta. A description of the overall system delay constraints can be found in 76.1.3.2 and the definition for the time_quantum can be found in 77.2.2.1."

*Cl* **75** *SC* **75.3.1.1** *P* **55** *L* **45** # 1931

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *PMD delay bounds*

"A description of the overall system delay constraints can be found in @@Subclause 77.3.2.4@@". It can't.

*SuggestedRemedy*

Point somewhere else: not sure where. Delete "@@Subclause". Make the cross-references between the new clauses and remove those @@.

*Response* *Response Status* **C**

ACCEPT.
See comment #1929 for resolution.

*Cl* **75** *SC* **75.3.1.1** *P* **55** *L* **45** # 1930

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *:ESSED], PMD delay bounds*

"The PMD shall introduce a constant transmit delay of not more than 4 time-quanta and constant receive delay of not more than 4 time-quanta." How constant is constant enough?

*SuggestedRemedy*

?

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"The PMD shall introduce a transmit delay of not more than 4 time_quanta with the variability of no more than 0.5 time_quanta, and a receive delay of not more than 4 time-quanta with the variability of no more than 0.5 time_quanta."

Update the PICS to match these modified "shall" statements.

*Cl* **75** *SC* **75.3.1.1** *P* **55** *L* **46** # 2288

Hajduczenia, Marek Nokia Siemens Networ

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

There is already a formalized way of denoting time_quanta. Text "constant receive delay of not more than 4 time-quanta" needs alignment.
Change "constant receive delay of not more than 4 time-quanta" to "constant receive delay of not more than 4 time_quanta".

*SuggestedRemedy*

Change "constant receive delay of not more than 4 time-quanta" to "constant receive delay of not more than 4 time_quanta".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.3.1.4** *P* **56** *L* **25** # 2009

Frazier, Howard Broadcom

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

missing "the" before "@@Clause 76@@ PCS"

*SuggestedRemedy*

insert "the"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "@@Clause 76@@ PCS" to "Clause 76 PCS". Make the link to Clause 76 live!

*Cl* **75** *SC* **75.3.1.5** *P* **56** *L* **46** # 2010

Frazier, Howard Broadcom

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

I think that the word "see" should be inserted right before the cross-reference at the end of this note.

*SuggestedRemedy*

as per comment.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.3.2** *P* **57** *L* **1** # 1588

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Test point description*

"TP1 - TP4" and "TP5 - TP8" are ambiguous as to whether they mean TP1 through TP4 or not

*SuggestedRemedy*

Change to "TP1 through TP4" and "TP5 through TP8"

*Response* *Response Status* **C**

ACCEPT.
See comment #2175

*Cl* **75** *SC* **75.3.2** *P* **57** *L* **21** # 2384

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The signal_detect should be shown connected to blocks in Figures 75-3 and 75-4, see Figures 36-10 and 51-3 for the use of this signal in the respective PMAs.

*SuggestedRemedy*

Connect signal_detect signal_detect here and in Figure 75-4.

*Response* *Response Status* **C**

ACCEPT.

signal_detect should be connected to the PMA block and not pointing elsewhere.

Extra explanation submitted by the author "In Figure 36-10 you will see that the PMD_SIGNAL.indication(signal_detect) primitive is shown passing through from the PMD service interface to the PMA service interface. In the case of Figure 51-3 you will see that the PMD_SIGNAL.indication primitive in the PMD service interface is passed into the PMA and then passed out, after gating, to the PMA service interface as the PMA_SIGNAL.indication primitive.
Hence in both cases it appears that signal_detect is connected to the PMA sublayer - this is further confirmed by the layer diagrams in Figure 36-1 and 51-1 that don't show the signal_detect bypassing the PMA sublayer.
Based on this, in Figures 75-3 and 75-4, signal_detect should be connected to the PMA block and not shown as an arrow pointing elsewhere."

Figure 76-9 is OK.

*Cl* **75** *SC* **75.3.2** *P* **57** *L* **3** # 2028

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *SSED], Test point description*

The introduction of two new conventions for identifying test points is bound to cause confusion. The previous TP1 through TP4 convention served us well since 802.3z, with only a minor modification for EPON in 802.3ah. I think that introducing TP5 through TP8, plus the rectangles and ovals, will not stand the test of time. How do you represent a rectangle or oval in a spreadsheet or a datasheet?

*SuggestedRemedy*

Revert to the test point identification convention established in 802.3ah Clause 60.

*Response* *Response Status* **U**

ACCEPT IN PRINCIPLE.
See comment #2175
TF believes that having unique identifiers for test points in downstream and upstream direction is less ambigious.

*Cl* **75** *SC* **75.3.2** *P* **57** *L* **3** # 1589

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Test point description*

"TP1 and TP4 and TP5 and TP8" is poor english.

*SuggestedRemedy*

Change to "TP1, TP4, TP5 and TP8"

*Response* *Response Status* **C**

ACCEPT.
See comment #2175

*Cl* **75** *SC* **75.3.2** *P* **57** *L* **48** # 1590

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Test point description*

"TP1 - TP4" is ambiguous as to whether it means TP1 through TP4 or not

*SuggestedRemedy*

Change to "TP1 through TP4"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2175

*Cl* **75** *SC* **75.3.2** *P* **57** *L* **7** # 2175

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **A** *SSED], Test point description*

In Table 75-3, the TP labels are unique between downstream and upstream paths (e.g. TP1-4 are defined in the downstream direction, and TP5-8 in the upstream). In Table 75-4, TP labels are not unique (e.g. TP1-4 are defined in the downstream direction, and TP1-4 are again defined in the upstream direction). The latter therefore requires that downstream and upstream be used whenever TP nomenclature is used.

*SuggestedRemedy*

Harmonize the definition of test points in the upstream and downstream direction. The use of unique testpoint identifiers is suggested. Make appropriate corrections to the text.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[changed from "E" to "T"]
[Page number was added]
[Figure 75-3, not Table 75-3 is probably referred to]
Changes suggested to 75.3.2:
(1) Remove Figure 75-4, change title of Figure 75-3 to read "10GBASE-PR and 10/1GBASE-PRX block diagram"
(2) Remove last paragraph on page 57 (starting from line 48 onwards) and two paragraphs on page 58 (lines 1 - 5 inclusive)
(3) Change two first paragraphs on page 57 "For 10GBASE-PR PMDs, test points TP1 - TP4 refer to the downstream channel, while test points TP5 - TP8 refer to the upstream channel. In the downstream channel, TP2 and TP3 are compliance points, while in the upstream channel TP6 and TP7 are compliance points. TP1 and TP4 and TP5 and TP8 are reference points for use by implementers. The optical transmit signal is defined at the output end of a patch cord (TP2 for the downstream channel and TP6 in the upstream channel), between 2 m and 5 m in length, of a fiber type consistent with the link type connected to the transmitter. Unless specified otherwise, all transmitter measurements and tests defined in Subclause 75.9 are made at TP2 and TP6. The optical receive signal is defined at the output of the fiber optic cabling (TP3 for the downstream channel and TP7 for the upstream channel) connected to the receiver. Unless specified otherwise, all receiver measurements and tests defined in Subclause 75.9 are made at TP3 and TP7. The electrical specifications of the PMD service interface (TP1 and TP4 for the downstream channel and TP5 and TP8 for the upstream channel) are not system compliance points (these are not readily testable in a system implementation)."
to read
"For 10GBASE-PR and 10/1GBASE-PRX PMDs, test points TP1 through TP4 refer to the downstream channel, while test points TP5 through TP8 refer to the upstream channel. In the downstream channel, TP2 and TP3 are compliance points, while in the upstream channel TP6 and TP7 are compliance points. TP1, TP4, TP5 and TP8 are reference points for use by implementers. The optical transmit signal is defined at the output end of a patch cord (TP2 for the downstream channel and TP6 in the upstream channel), between 2 m and 5 m in length, of a fiber type consistent with the link type connected to the transmitter. Unless specified otherwise, all transmitter measurements and tests defined in 75.9 are made at TP2 and TP6, while tests defined in 60.7 are made at TP6. The optical receive signal is defined at the output of the fiber optic cabling (TP3 for the downstream channel and TP7 for the upstream channel) connected to the receiver. Unless specified otherwise, all receiver measurements and tests defined in 75.9 are made at TP3 and TP7. The electrical specifications of the PMD service interface (TP1 and TP4 for the downstream channel and TP5 and TP8 for the upstream channel) are not system compliance points (these are not readily testable in a system implementation)."
(4) Change line 12 on page 81, 75.11, from "MDI to another MDI, as shown in Figure 75-3 and Figure 75-4." to "MDI to another MDI, as shown in Figure 75-3."
(5) collapse any occurences of "Figure 75-3 and Figure 75-4" to "Figure 75-3" in all subclauses (references found at Clauses 75, 76)
(6) renumber all figures and all references as applicable
(7) Change ovals and rectangles to rectangles only.
(8) Change text on page 56, lines 50-53 from "The PMD sublayer is defined at the eight reference points shown in Figure 75-3 for 10GBASE-PR PMDs and in Figure 75-4 for 10/1GBASE-PRX PMDs. In Figure 75-3 and Figure 75-4, test points in ovals represent the downstream channel, while the test points in rectangles represent the upstream channel."
to read "The PMD sublayer is defined at the eight reference points shown in Figure 75-3 for 10GBASE-PR and 10/1GBASE-PRX PMDs.". Make sure all links are live!
(9) Change Table 75-16 TP1-TP4 to TP5-TP8.

*Cl* **75** *SC* **75.3.5.2** *P* **59** *L* **21** # 2362

Law, David 3Com

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

Change the text '.. Clause 75 type PMDs.' to read '.. 10GBASE-PR and 10/1GBASE-PRX type PMDs.'.

*SuggestedRemedy*

See comment.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change text "(.)Clause 75 type PMDs." to read "(.)PMDs defined in Clause 75.".

*Cl* **75** *SC* **75.3.5.2** *P* **59** *L* **23** # 2385

Law, David 3Com

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

I assume that a 10/1GBASE-PRX-D PMD receiver doesn't need to verify if a valid 10GBASE-PR signal is being received either.

*SuggestedRemedy*

Change the text '.. not required to verify whether a compliant 1000BASE-PX signal is being received.' to read '.. not required to verify whether a compliant 10GBASE-PR or 1000BASE-PX signal is being received.

*Response* *Response Status* **C**

REJECT.
10/1GBASE-PRX only receives 1000BASE-PX signal.

*Cl* **75** *SC* **75.3.5.3** *P* **59** *L* **25** # 1652

Anslow, Peter Nortel Networks

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

Heading is "10GBASE-PR and 1000BASE-PX Signal detect functions". This subclause does not describe 1000BASE-PX

*SuggestedRemedy*

Change heading to "10GBASE-PR and 10/1GBASE-PRX Signal detect functions"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **75** *SC* **75.3.5.3** *P* **59** *L* **45** # 2387

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The damage threshold would seem to be just one example that would need to be considered for a dual-rate OLT that has the split in the electrical domain. Take for example the signal detect function found in 75.3.5.3. Which of the two columns do I choose from Table 75-4, the 10GBASE-PR-D or the 10/1GBASE-PRX-D column.

Now 'dual-rate' operation could reasonably be confused with 10/1GBASE-PRX operation since that PHY type supports two rates - even thought that is actually asymmetric operation.

Now for 10/1GBASE-PRX-D PHYs Table 75-4 states that when optical power is below threshold Signal_detect = FAIL, when above threshold with a valid 1000BASE-PX signal Signal_detect = OK and under 'All other conditions' Signal_detect is Unspecified.

This would seem to permit setting Signal_detect = FAIL when the optical power is above threshold with a valid 10GBASE-PR signal which doesn't seem correct.

The inverse is true if the 10GBASE-PR column is chosen.

*SuggestedRemedy*

Provide full information on dual-rate operation, particularly in the case of an electrical split where, in effect, a new PMD is required.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

See implementation per 3av_0809_hamano_1.pdf.

---

*Cl* **75** *SC* **75.4.1** *P* **61** *L* **30** # 1591

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Figure 75-5, Figure 75-6 title*

The title of Figure 75-5 is "Relaxed PR-D type PMD specifications" this is inappropriate

*SuggestedRemedy*

change title to "Graphical representation of region of PR-D type transmitter compliance"

*Response* *Response Status* **C**

ACCEPT.
See also comment #1594

---

*Cl* **75** *SC* **75.4.1** *P* **61** *L* **5** # 1715

Lin, Rujian Shanghai Luster Terab

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

Shaded area indecates compliant part.

*SuggestedRemedy*

Correction: Shaded area indecates the compliant part.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to "Shaded area indicates the compliant part".

---

*Cl* **75** *SC* **75.4.2** *P* **61** *L* **40** # 1592

Anslow, Peter Nortel Networks

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

The text states "Either the damage threshold included in Table 75-6 and Table 75-7 shall be met,..." but only one of the damage thresholds needs to be met for a particular receiver.

*SuggestedRemedy*

Change to "Either the damage threshold included in Table 75-6 or Table 75-7 shall be met,..."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.4.2** *P* **61** *L* **43** # 2011

Frazier, Howard Broadcom

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

Need a couple more definite articles in this paragraph. Insert the word "The" before "Damage threshold" in two places.

*SuggestedRemedy*

as per comment.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **75** *SC* **75.4.2** *P* **62** *L* **13** # 2029

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **R** *CESSED], Damage threshold*

The damage threshold is only 1 dB above the average receive power, which doesn't seem like enough margin. In 802.3ah the margin was 5 dB for PX10
and 10 dB for PX20.

*SuggestedRemedy*

Set the damage threshold at least 5 dB above the average receive power.

*Response* *Response Status* **U**

REJECT.
During the discussions on the PMDs, it was decided that 1 dB damage threshold was acceptable. Higher values would prohibit design of 29 dB CHIL PMDs.

Accept this response
Yes: 22
No: 0
Abstain: 2

---

*Cl* **75** *SC* **75.5** *P* **64** *L* **6** # 2289

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *ROCESSED], PMD type lists*

Lines 6-10 are affected.
Text "The operating ranges for PR10, PR20, PR30 power budget classes are defined in Table 75-1. The operating ranges for PRX10, PRX20, PRX30 power budget classes are defined in Table 75-1. A PR10, PR20, PR30, PRX10, PRX20 or PRX30 compliant transceiver operates over the media types listed in Table 75-20 according to the specifications described in Subclause 75.11." contains reference to individual power budgets. There is no need for that. Generic power budget names can be used, as in 75.4.

*SuggestedRemedy*

Change
"The operating ranges for PR10, PR20, PR30 power budget classes are defined in Table 75-1. The operating ranges for PRX10, PRX20, PRX30 power budget classes are defined in Table 75-1. A PR10, PR20, PR30, PRX10, PRX20 or PRX30 compliant transceiver operates over the media types listed in Table 75-20 according to the specifications described in Subclause 75.11."
to
"The operating ranges for PR power budget classes are defined in Table 75-1. The operating ranges for PRX power budget classes are defined in Table 75-1. A PR and PRX compliant transceiver operates over the media types listed in Table 75-20 according to the specifications described in Subclause 75.11."
Make sure all the links are live.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"The operating ranges for PR and PRX power budget classes are defined in Table 75-1. A PR and PRX compliant transceiver operates over the media types listed in Table 75-20 according to the specifications described in Subclause 75.11."
Make sure all the links are live.

---

*Cl* **75** *SC* **75.5** *P* **64** *L* **7** # 1767

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *PMD type lists*

"PR10, PR20, PR30" should be "PR10, PR20, and PR30". Also, in L8, "PRX10, PRX20, PRX30" has the same issue.

*SuggestedRemedy*

L7: "PR10, PR20, and PR30"
L8: "PRX10, PRX20, and PRX30"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Subclause number was fixed]
See comment #2289

*Cl* **75** *SC* **75.5** *P* **68** *L* **18** # 1768

KIMURA, Mitsunobu Hitachi Communicatio

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

Comment "c" doesn't have a period (".").

*SuggestedRemedy*

A period is needed.

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **75** *SC* **75.5.1** *P* **64** *L* **23** # 1593

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

The text states "Its RIN15OMA should meet the value listed in Table 75-8 and Table 75-9 ..." but only one of the values needs to be met for a particular receiver."

*SuggestedRemedy*

Change to "Its RIN15OMA should meet the value listed in Table 75-8 or Table 75-9 ..."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change text
"Its RIN15OMA should meet the value listed in Table 75-8 and Table 75-9 per measurement techniques described in Subclause 75.9.8."
to read
"Their RIN15OMA should meet the value listed in Table 75-8 or Table 75-9, respectively, per measurement techniques described in 75.9.8."
Make sure all links are live!

*Cl* **75** *SC* **75.5.1** *P* **64** *L* **53** # 181523

Hamano, Hiroshi Fujitsu Labs.

*Comment Type* **T** *Comment Status* **A** *Table 75-8 Footnote C*

In Footnote C, word preciseness should be cared.
Not only "laser source", but the total "transmitter" affects TDP value.
Power can be relaxed not by "the same amount" as the TDP, but "the same decrement" as the TDP.
What should be indicated here is "the more tightened TDP, the more relaxed power.

*SuggestedRemedy*

Change "laser source" to "transmitter".
Change "the same amount" to "the same decrement".
And Footnote C will be as follows
If a transmitter has a lower TDP, the minimum transmitter launch OMA (OMAmin) and average minimum launch power (AVPmin) may be relaxed by the same decrement as the TDP.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1664.

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft

(was "E" changed to "T")

Change "laser source" to "transmitter".
Change "the same amount" to "the same decrement".
New text of footnote c) will read as follows: "If a transmitter has a lower TDP, the minimum transmitter launch OMA (OMAmin) and average minimum launch power (AVPmin) may be relaxed, decrementing them by the same value as TDP.
@@"min" in AVPmin and OMAmin must be subscripted@@

==========

*Cl* **75** *SC* **75.5.1** *P* **64** *L* **53** # 1664

Anslow, Peter Nortel Networks

*Comment Type* **TR** *Comment Status* **A** *SED], Table 75-8 Footnote C*

Table 75-8 Note C states "If a laser source has a lower TDP, the minimum transmitter launch OMA (OMAmin) and average minimum launch power (AVPmin) may be relaxed by the same amount as the TDP."
So according to this, if my TDP is say 2.9 dB, I can relax my launch power by 2.9 dB!! This must be re-worded.

*SuggestedRemedy*

change to "If a laser source has a lower TDP, the minimum transmitter launch OMA (OMAmin) and average minimum launch power (AVPmin) may be relaxed by the amount 3.0 - TDP."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
change to "If a transmitter has a lower TDP, the minimum transmitter launch OMA (OMAmin) and average minimum launch power (AVPmin) may be relaxed by the amount 3.0 dB - TDP."

---

*Cl* **75** *SC* **75.5.1** *P* **65** *L* **33** # 1596

Anslow, Peter Nortel Networks

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

Table 75-9 Note c uses the abbreviation "DFB". This is not in the list of abbreviations.

*SuggestedRemedy*

Add "DFB" to the list of abbreviations

*Response* *Response Status* **C**

ACCEPT.
Add a new abbreviation in C01/1.5 to read as follows "DFB Distributed Feedback Laser".
Format as appropriate.

---

*Cl* **75** *SC* **75.5.1** *P* **65** *L* **33** # 1595

Anslow, Peter Nortel Networks

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

Table 75-9 Note c states "In case FP-LD is used, RMS spectral width shall comply with Table 75-10. In case DFB laser is used, transmitter's
side mode suppression ratio (min) shall be 30 dB." This is poor english.

*SuggestedRemedy*

Change to "If the transmitter employs a Fabry-Perot laser, the RMS spectral width shall comply with Table 75-10. If the transmitter employs a DFB laser, the side mode suppression ratio (min) shall be 30 dB."

*Response* *Response Status* **C**

ACCEPT.
Make sure it gets implemented together with comment #1596.

---

*Cl* **75** *SC* **75.5.1** *P* **65** *L* **5** # 1716

Lin, Rujian Shanghai Luster Terab

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

Shaded area indecates compliant part.

*SuggestedRemedy*

Correction: Shaded area indecates the compliant part.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Shaded area indicates the compliant part.
See comment #1715

---

*Cl* **75** *SC* **75.5.1** *P* **66** *L* **14** # 181526

Hamano, Hiroshi Fujitsu Labs.

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

In Figure 75-6, relaxed power level indication suffix seems incorrect in "Apostrophe" placement.

*SuggestedRemedy*

Change "AVP 'min" to "AVP' min".

*Response* *Response Status* **C**

ACCEPT.

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

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*Cl* **75** *SC* **75.5.1** *P* **66** *L* **9** # 1800

Hamano, Hiroshi Fujitsu Labs.

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

In Figure 75-6, 'ER = 9 dB' dashed line is partially hidden behind the hatching pattern. It looks strange, if there is no specific meaning to do so.

*SuggestedRemedy*

Change the placement order to show the dashed line in front.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.5.2** *P* **66** *L* **24** # 1594

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Figure 75-5, Figure 75-6 title*

The title of Figure 75-6 is "Relaxed PR-U type PMD specifications" this is inappropriate

*SuggestedRemedy*

change title to "Graphical representation of region of PR-U type transmitter compliance"

*Response* *Response Status* **C**

ACCEPT.
See also comment #1591.

*Cl* **75** *SC* **75.5.2** *P* **67** *L* **46** # 2030

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **R** *CESSED], Damage threshold*

In Table 75-11, there is only 1 dB margin between average receive power (max) and the damage threshold. I think this is too small. 802.3ah had a margin of 5 dB for PX10 and 10 dB for PX20.

*SuggestedRemedy*

set the damage threshold at least 5 dB above the average receiver power (max).

*Response* *Response Status* **U**

REJECT.
See comment #2029 for rationale

*Cl* **75** *SC* **75.6** *P* **69** *L* **10** # 2176

Woodward, Ted Telcordia Technologie

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

Table 75-12 and Table 75-13 do not provide a source reference to fiber Types B1.1, B1.3.

*SuggestedRemedy*

include reference to Table 75-20, or to appropriate ITU documents

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[changed from "E" to "T"]
[Page number was added]
See comment #1805

*Cl* **75** *SC* **75.6** *P* **69** *L* **27** # 1769

KIMURA, Mitsunobu Hitachi Communicatio

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

Comment "a" doesn't have a period (".").

*SuggestedRemedy*

A period is needed.

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **75** *SC* **75.6** *P* **69** *L* **29** # 2166

Bennett, Michael LBNL

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

In footnote d:
Nominal distance refers to the expected maximum distance a PMD will be capable of achieving in a typical ODN, numerous ODN implementation practices may result ** is ** longer or shorter distances being actually achievable in ** users'**
network.

"is" should be "in" and users' should be user's

*SuggestedRemedy*

replace "is" with "in" and "users'" should be a user's

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **75** *SC* **75.6** *P* **69** *L* **30** # 1717

Lin, Rujian Shanghai Luster Terab

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

...in a typical ODN, numerous ODN implementation practices may result is ....

*SuggestedRemedy*

Correction:...in a typical ODN. Numerous ODN implementation practices may result in ....

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.6** *P* **69** *L* **32** # 1597

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *BER limit description*

Table 75-12 Note e is "The available power budget assumes input BER from the PMD service interface of 10-3. The required BER of 10-12 at the PCS service interface is achieved by the FEC function of the PCS." This is written from the point of view of the FEC function in the PCS, but the clause is about the PMD not the PCS. Should be re-worded.

*SuggestedRemedy*

Change Note e to "The available power budget assumes a BER at the PMD service interface of 10-3. The required BER of 10-12 at the PCS service interface is achieved by the FEC function of the PCS."
Also, use a non-breaking - (Ctrl-q Shift-p) so that the 12 does not appear on a different line from 10-

*Response* *Response Status* **C**

ACCEPT.
Combine with comment #1598.

*Cl* **75** *SC* **75.6** *P* **70** *L* **15** # 1799

Hamano, Hiroshi Fujitsu Labs.

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

In Table 75-13, 'Channel insertion loss (min)' line alone is messy, compared to 'Channel insertion loss (max)', and not consistent with Table 75-12.

*SuggestedRemedy*

Combine US and DS columns into one for each power budget class.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.6** *P* **70** *L* **20** # 1770

KIMURA, Mitsunobu Hitachi Communicatio

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

Comment "a" doesn't have a period (".").

*SuggestedRemedy*

A period is needed.

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **75** *SC* **75.6** *P* **70** *L* **23** # 1718

Lin, Rujian Shanghai Luster Terab

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

...in a typical ODN, numerous ODN implementation practices may result is ....

*SuggestedRemedy*

Correction:...in a typical ODN. Numerous ODN implementation practices may result in ....

*Response* *Response Status* **C**

ACCEPT.
See comment #1717

*Cl* **75** *SC* **75.6** *P* **70** *L* **23** # 2167

Bennett, Michael LBNL

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

Footnote d "is" should be "in" and "users'" should be "user's"

*SuggestedRemedy*

replace "is" with "in" and "users'" with "user's"

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]
See also comment #2166

*Cl* **75** *SC* **75.6** *P* **70** *L* **25** # 1598

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *BER limit description*

Table 75-13 Note e is "The available power budget assumes input BER from the PMD service interface of 10-3. The required BER of 10-12 at the PCS service interface is achieved by the FEC function of the PCS." This is written from the point of view of the FEC function in the PCS, but the clause is about the PMD not the PCS. Should be re-worded.

*SuggestedRemedy*

Change Note e to "The available power budget assumes a BER at the PMD service interface of 10-3. The required BER of 10-12 at the PCS service interface is achieved by the FEC function of the PCS."
Also, use a non-breaking - (Ctrl-q Shift-p) so that the 12 does not appear on a different line from 10-

*Response* *Response Status* **C**

ACCEPT.
See comment #1597
Combine with comment #1597.

*Cl* **75** *SC* **75.6.1** *P* **70** *L* **40** # 181525

Hamano, Hiroshi Fujitsu Labs.

*Comment Type* **E** *Comment Status* **A** *Figure 75-7 links*

Figure number reference is incorrect.
That in Line 47 is also the same.

*SuggestedRemedy*

Change "Figure 75-7" to "Figure 75-8".

*Response* *Response Status* **C**

ACCEPT.
[Page numbers were updated to D2.0]

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

==========

*Cl* **75** *SC* **75.6.1** *P* **70** *L* **40** # 2291

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *Figure 75-7 links*

Incorrect reference to Figure 75-5. Figure 75-8 should be linked in this place. The same is true for reference in line 46.

*SuggestedRemedy*

Change reference to Figure 75-7 to Figure 75-8 (the one on page 71). Make sure that both changes (in line 40 and 41) are live.

*Response* *Response Status* **C**

ACCEPT.
See comment #181525

*Cl* **75** *SC* **75.6.1** *P* **71** *L* **19** # 181530

Hamano, Hiroshi Fujitsu Labs.

*Comment Type* **T** *Comment Status* **A** *;ED], Changes to Figure 75-8*

In Figure 75-8, PRX10, PRX20, PRX30 upstream wavelength band illustration for 10G-EPON is missing.

*SuggestedRemedy*

See Supplement 3av_0807_hamano_1.pdf.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2290.

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

Editors suggest to further separate PR and PRX type PMD wavelength allocation plan for complete clarity. Otherwise, bands will overlap in the US channel.

==========

*Cl* **75** *SC* **75.6.1.1** *P* **70** *L* **44** # 1653

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *Figure 75-7 links*

The first paragraph of 75.6.1.1. refers to Figure 75-7. This should be Figure 75-8

*SuggestedRemedy*

Change reference to Figure 75-8

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #181525

Cl **75** SC **75.6.1.1** P **70** L **47** # 2388
Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *Figure 75-7 links*

Cross-reference error.

Figure 75-5 is '10/1GBASE-PRX-U3 transmitter spectral limits' whereas Figure 75-8 is the 'Wavelength allocation plan for (a) EPON and (b) 10G-EPON.' that seems to be referenced.

*SuggestedRemedy*

Change '..in Figure 75-7.' to read '.. in Figure 75-8.'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #181525

---

Cl **75** SC **75.6.1.1** P **70** L **49** # 2168
Bennett, Michael LBNL

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

sub-sets should not be hyphenated

*SuggestedRemedy*

replace sub-sets with subsets

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]
[Page number was added]

---

Cl **75** SC **75.6.1.1** P **70** L **51** # 2373
Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *:SSED], Informative Annexes*

This paragraph of this subclause should be moved to an informative annex relate to dual-rate operation as this is the only case this would apply.

*SuggestedRemedy*

Delete the text 'An OLT supporting both downstream channels may multiplex the output of the two transmitters using a WDM coupler, while an ONU selects the relevant downstream channel using an optical filter.' from here and place in the dual-rate operation informative annex.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Implementation per 3av_0809_remein_2.pdf.

---

Cl **75** SC **75.6.1.1** P **71** L **1** # 2290
Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *:ED], Changes to Figure 75-8*

Figure 75-8 has some issues:
- EPON wavelength plan is not needed
- PRX upstream channel is not depicted properly
Suggested to replace Figure 75-8 with the contents of 3av_0809_hajduczenia_3.pdf

*SuggestedRemedy*

Suggested to replace Figure 75-8 with the contents of 3av_0809_hajduczenia_3.pdf.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Align the height in (a) to match all other bands.
3av_0809_hajduczenia_4.pdf is referred to.

---

Cl **75** SC **75.6.1.1** P **71** L **1** # 2075
Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *Changes to Figure 75-8*

1G EPON is not in scope of clause 75. Figure 75-8 part (a) should depict wavelength map of PRX devices and part (b) should depict wavelength map of PR devices

*SuggestedRemedy*

Modify Figure 75-8 per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2290

---

Cl **75** SC **75.6.1.2** P **71** L **34** # 2292
Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *- Clause 76 missed reference*

Incorrect reference to Clause 76. In text "specified in @@Clause 76@@.", reference to clause 75 should be used. Clause 76 does not specify PMD parameters.

*SuggestedRemedy*

Change "specified in @@Clause 76@@." to "specified in @@Clause 75@@."
Make sure that the link is live.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "specified in @@Clause 76@@." to "specified in Clause 75."
Make sure that the link is live.

*Cl* **75** *SC* **75.6.1.2** *P* **71** *L* **34** # 1654

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *- Clause 76 missed reference*

This states that "The 10 Gb/s upstream transmission uses the 1260 - 1280 nm wavelength band, as specified in @@Clause 76@@" but the wavelengths are specified in clause 75

*SuggestedRemedy*

change to "The 10 Gb/s upstream transmission uses the 1260 - 1280 nm wavelength band, as specified in Clause 75"

*Response* *Response Status* **C**

ACCEPT.
See comment #2292

---

*Cl* **75** *SC* **75.6.1.2** *P* **71** *L* **36** # 2031

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **R** *:SSED], Informative Annexes*

The second paragraph of this subclause is tutorial in nature and should be deleted.

*SuggestedRemedy*

delete the 2nd paragraph of 75.6.1.2.

*Response* *Response Status* **U**

REJECT.
This text helps readers in selecting relevant section of this specification and is useful for this reason.

I accept this resolution
Yes: 26
No: 0
Abstain: 1

[Editorial note: See comment #2373.]

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*Cl* **75** *SC* **75.6.1.2** *P* **71** *L* **37** # 2406

Law, David 3Com

*Comment Type* **TR** *Comment Status* **A** *D], joint, Informative Annexes*

It is very confusing to use the term 'dual-rate' operation to mean something other that 10/1Gb/s operation supported by 10/1GBASE-PRX PHYs. What is described here seems instead to be dual-mode operation - or coexistence of EPON and 10GEPON - although it is not clear if dual-rate refers to [a] the coexistence of 10GBASE-PR and 10/1GBASE-PRX, [b] the coexistence of 10GBASE-PRX with 1000BASE-PX, [c] 10/1GBASE-PRX and 1000BASE-PX or [d] any of the above.

Also it is not clear why it has to be stated that TDMA techniques have to be used specifically in the case of coexistence to avoid collisions since, as far as I understood, TDMA always has to be used in PONs to avoid collisions.

Finally the term channel is used to refer to the Fibre optic cable plant - see for example Figure 75-3 and Table 75-1 (channel insertion loss).

*SuggestedRemedy*

Change the text 'An OLT supporting both upstream channels must use TDMA techniques to avoid collisions between transmissions originating from different ONUs, resulting in a dual-rate, burst mode transmission as discussed in Subclause 75.7.' to read 'For implemeantion information related to an OLT that supports both upstream wavebands see subclause 75.7.'. The details of the coexistence should be described in that subclause.

Elsewhere in the draft change 'dual-rate' to read 'coexistence'.

*Response* *Response Status* **U**

ACCEPT IN PRINCIPLE.

Where appropriate replace term "channel" with "data rate".

In the draft, 10/1GBASE-PRX is referred to as "asymmetric-rate" PHY. The term "dual-rate" is exclusively reserved for OLT Rx being able to receive 10G and 1G signals.
TF believes that term "dual rate" is more specific than term "coexistence" and should be retained.

Implement together with #2373 and #2347.

*Cl* **75** *SC* **75.7** *P* **71** *L* **41** # 2032

Frazier, Howard Broadcom

*Comment Type* **TR** *Comment Status* **A** *mative Annexes, Hidden sha*

This entire subclause, while well written and informative, is tutorial in nature. It discusses implementation choices, not interoperability requirements.
The exception is the shall statement in the last paragraph of the subclause which deals with the damage threshold of a dual rate receiver. A shall statement should not appear in a subclause that is labled "informative", so this requirement should be moved to a normative subclause.

*SuggestedRemedy*

Delete the subclause and move the damage threshold requirement to a normative subclause.

*Response* *Response Status* **U**

ACCEPT IN PRINCIPLE.

This section is informative and deemed useful, thus should be retained.

"Shall" statement was removed per comment #1599. Section can be moved to a separate annex pending resolution to comment #2373.

*Cl* **75** *SC* **75.7** *P* **71** *L* **42** # 2402

Law, David 3Com

*Comment Type* **TR** *Comment Status* **A** *SSED], Informative Annexes*

Subclause 75.7 contains informative information related to a number of implementation options - however any other implementation that meets the normative portions of the standard is conformant.

Further clause 10.1 of the 2007 IEEE Style Manual states:

10.1 Normative and informative clauses

Normative text means information that is required to implement the standard and is therefore officially part of the standard. Informative text is provided for information only and is therefore not officially part of the standard.

The draft standard shall contain normative text in the main clauses of the document, including footnotes to tables (see 15.5), and in normative annexes. Informative text shall be placed in notes (to text, tables, and figures), in footnotes within text, and in informative annexes. Interspersed normative and informative text is not allowed. Identification of normative or informative text shall be reviewed during the ballot of a document. Therefore it is important that the working group consult an IEEE Standards project editor early with any questions.

*SuggestedRemedy*

Move subclause 75.6 to be an informative Annex. For the same reasons also move subclause 77.4, which has related dual-rate information, to an informative Annex.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Implementation per 3av_0809_remein_2.pdf.

*Cl* **75** *SC* **75.7** *P* **71** *L* **46** # 2347

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *:SSED], Informative Annexes*

TDMA does not appear in in IEEE 802.3 definitions (1.4) nor the abbreviations (1.5).

*SuggestedRemedy*

Add TDMA to 1.4 and 1.5 or change the text as follows:

[1] Line 37 change '.. upstream channels must use TDMA techniques ..' to read '.. upstream channels must use time slicing techniques ..'.

[2] Line 46 change '.. both data rates via TDMA.' to read '.. both data rates through allocating them different time slots.'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add the following text to C01 / 1.5:
"TDMA Time Division Multiple Access"
Add the following text to C01 / 1.4
"Time Division Multiple Access (TDMA) is a channel access method used in shared medium networks, e.g. Passive Optical Networks (PON) based on tree-and-branch architecture. TDMA allows multiple transmitters to share the same channel by transmitting their data in separate time slots."

*Cl* **75** *SC* **75.7** *P* **71** *L* **50** # 2348

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *Informative Annexes*

The term 'stack' isn't defined in IEEE 802.3 or used anywhere else, I assume this is a reference to the 7 layer model, besides this text is a discussion of implementation options rather than the architectural model.

*SuggestedRemedy*

Change the text '.. point in the stack it is ..' to read '.. point in the implementation it is ..'

*Response* *Response Status* **C**

ACCEPT.
Implement together with comment #2373

*Cl* **75** *SC* **75.7** *P* **72** *L* **4** # 2368

Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *rmative Annexes, TIA acrony*

The abbreviations TIA, LA and APD are used in this subclause. I assume that TIA is transimpedance amplifier, LA is limiting amplifier and that APD is avalanche photo diode. TIA is in subclause 1.5 'Abbreviations' however it is defined as 'Telecommunications Industry Association', LA and APD aren't defined.

*SuggestedRemedy*

The simplest thing to do since these abbreviations are used only in this subclause is:

[1] Page 71, line 53 Change '.. the TIA block.' to read '.. the transimpedance amplifier (TIA) block.'. This covers all uses in the text after this point.

[2] In Figure 75-9, either change all instances of 'TIA' to read 'transimpedance amplifier' or add a key at the bottom of these two figures that reads 'TIA - transimpedance amplifier'.

[3] In Figure 75-10 change 'TIA' in the title to read 'transimpedance amplifier'.

[4] In Figures 75-9 and 75-10, either change all instances of 'LA' to read 'limiting amplifier' or add a key at the bottom of these two figures that reads 'LA - limiting amplifier'.

[5] On page 72, line 50 change '.. fixes the APD bias ..' to read 'fixes the avalanche photo diode (APD) bias ..'. This covers all uses in the text after this point.

[6] In Figure 75-10, either change all instances of 'APD' to read 'avalanche photo diode' or add a key at the bottom of these two figures that reads 'APD - avalanche photo diode'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Editorial note: Implement together with comment #2373]

[1] Page 71, line 53 Change '.. the TIA block.' to read '.. the transimpedance amplifier (TIA) block.'. This covers all uses in the text after this point.

[2] In Figure 75-9, add a key at the bottom of these two figures that reads 'TIA - transimpedance amplifier'.

[3] In Figure 75-10 change 'TIA' in the title to read 'transimpedance amplifier'.

[4] In Figures 75-9 and 75-10, add a key at the bottom of these two figures that reads 'LA - limiting amplifier'.

[5] On page 72, line 50 change '.. fixes the APD bias ..' to read 'fixes the avalanche photo diode (APD) bias ..'. This covers all uses in the text after this point.

[6] In Figure 75-10, add a key at the bottom of these two figures that reads 'APD - avalanche photo diode'.

*Cl* **75** *SC* **75.7** *P* **72** *L* **44** # 2367

Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *mative Annexes, Implementa*

The three implementations listed as three examples, there are not necessarily the only three choices, any implementation that meets the normative requirements of this standard is an acceptable choice.

*SuggestedRemedy*

Change the text 'There are three implementation choices ..' to read 'Some implementation choices ..'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change "There are three implementation choices in this regard, as shown in Figure 75-10(a)-(c):" to "There are several implementation choices in this regard, three examples of which are shown in Figure 75-10(a)-(c):"

---

*Cl* **75** *SC* **75.7** *P* **72** *L* **45** # 2177

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **A** *exes, Implementation choices*

This section has a lot of good implementation detail. This is informative, but may be too emphatic in stipulating solutions. For example, "There are three implementation choices in this regard..." should be changed to suggest that there are 'at least three', and not to imply that these are the only solutions.

*SuggestedRemedy*

change ' There are three implementation choices .. ' to ' Three exemplary implementation choices ... are:'

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Page number was added]
[Subclause number was fixed]
See coment #2367
Implement together with comment #2373

---

*Cl* **75** *SC* **75.7** *P* **72** *L* **46** # 2349

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *Informative Annexes*

We use the term 'implementation' rather than 'design'.

*SuggestedRemedy*

On page 72, lines 46 and 50, and on page 73 lines 2 and 4 change the text 'This design ..' to read 'This implementation ..'.

*Response* *Response Status* **C**

ACCEPT.
Implement together with comment #2373

---

*Cl* **75** *SC* **75.7** *P* **72** *L* **5** # 1655

Anslow, Peter Nortel Networks

*Comment Type* **ER** *Comment Status* **A** *rmative Annexes, TIA acrony*

Figure 75-9 uses the abbreviations "TIA", "PON", "LA". PON and LA are not in the abbreviations list. "TIA" is there but it stands for "Telecommunications Industry Association"!

*SuggestedRemedy*

Add the abbreviations "TIA", "PON", "LA" to the abbreviations list.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #2368.

---

*Cl* **75** *SC* **75.7** *P* **73** *L* **3** # 2350

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *Informative Annexes*

The text has already stated that this is the most complex, it is up to the implemented to judge what the cost benefit is for them.

*SuggestedRemedy*

Delete the text 'and it is unclear if the benefits outweigh the costs.'.

*Response* *Response Status* **C**

ACCEPT.
Implement together with comment #2373

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*Cl* **75** *SC* **75.7** *P* **73** *L* **33** # 2369

Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *SSED], Informative Annexes*

These figures illustrate implementations since the show specific components such as avalanche photo diodes.

*SuggestedRemedy*

In the title of figure 75-10 change the text '.. architectures:' to read '.. implementations:'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.7** *P* **73** *L* **41** # 2377

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *:SSED], Informative Annexes*

I'm not sure that the deliver of such information would be a layer violation, what instead is a violation is the assumption that information is available at that layer - which it is not.

In addition there are a couple of typos, 'MAC Client level' should read 'MAC Client', 'PMD layer' should read 'PMD sublayer'.

*SuggestedRemedy*

Change '.. such information is available only at the MAC Client level and its delivery to the PMD layer would violate the stack layering restrictions.' to read '.. such information is available only to the MAC Client and is not available to PMD sublayer.'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.7** *P* **73** *L* **46** # 2351

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *Informative Annexes*

The text at the start of this paragraph states that it describes 'One of the simplest methods ..' and this last sentence could be added to ever paragraph in this informative information, other implementations can be used. This sentence is therefore not required.

*SuggestedRemedy*

Delete the text 'Other implementation specific methods to control the APD-TIA speed are also possible, though are not discussed in this document.'.

*Response* *Response Status* **C**

ACCEPT.
Implement together with comment #2373

*Cl* **75** *SC* **75.7** *P* **73** *L* **50** # 1599

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *nnexes, Hidden shall in 75.7*

The text states "Therefore, damage threshold (max) of the 1/10 Gb/s dual-rate receiver shall comply with the 10 Gb/s receiver specification in Table 75-6, even when receiving 1 Gb/s signal."
1) it is inappropriate to use "shall" in an informative clause
2) why should the receiver have to comply with the 10G damage threshold when actually receiving a 1G signal?

*SuggestedRemedy*

Change to "Therefore, the damage threshold (max) of the 1/10 Gb/s dual-rate receiver should comply with the 10 Gb/s receiver specification in Table 75-6."

*Response* *Response Status* **C**

ACCEPT.
[Changed from "E" to "T"]
Implement together with comment #2373

*Cl* **75** *SC* **75.7** *P* **73** *L* **50** # 2403

Law, David 3Com

*Comment Type* **TR** *Comment Status* **A** *mative Annexes, Hidden sha*

You cannot have a shall statement in the middle of a subclause that is labeled informative - it also unfair to hide this conformance requirement here since it is actually an exception condition to conformance requirements stated elsewhere in relation to Tables 75-6 and 60-5.

*SuggestedRemedy*

Move the content of lines 50 through 54 to subclause 75.4.2 which already addresses damage thresholds in its second paragraph.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1599

*Cl* **75** *SC* **75.8** *P* **74** *L* **1** # 2370

Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *:SSED], Informative Annexes*

Subclause 75.8 contains informative information related jitter. Clause 10.1 of the 2007 IEEE Style Manual states:

10.1 Normative and informative clauses

Normative text means information that is required to implement the standard and is therefore officially part of the standard. Informative text is provided for information only and is therefore not officially part of the standard.

The draft standard shall contain normative text in the main clauses of the document, including footnotes to tables (see 15.5), and in normative annexes. Informative text shall be placed in notes (to text, tables, and figures), in footnotes within text, and in informative annexes. Interspersed normative and informative text is not allowed. Identification of normative or informative text shall be reviewed during the ballot of a document. Therefore it is important that the working group consult an IEEE Standards project editor early with any questions.

*SuggestedRemedy*

Move subclause 78.5 to an informative Annex.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Implementation per 3av_0809_remein_2.pdf.

*Cl* **75** *SC* **75.8** *P* **74** *L* **1** # 2293

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *:s, Labels in 75-11 and 75-12*

Figures 75-11 and 75-12 are affected.
There are strange character in place of "-" sign in the slope description.
Replace "Slope = 'Äì20 dB/d" with "Slope = -20 dB/d"

*SuggestedRemedy*

Replace "Slope = 'Äì20 dB/d" with "Slope = -20 dB/d" in Figures 75-11 and 75-12.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.8** *P* **74** *L* **12** # 2076

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *:s, Labels in 75-11 and 75-12*

Corrupted labels in Figures 75-11 and 75-12

*SuggestedRemedy*

Correct font

*Response* *Response Status* **C**

ACCEPT.
See comment #2293

*Cl* **75** *SC* **75.8** *P* **74** *L* **12** # 1798

Hamano, Hiroshi Fujitsu Labs.

*Comment Type* **E** *Comment Status* **A** *:s, Labels in 75-11 and 75-12*

In Figure 75-11 and Figure 75-12, illegal characters are used.

*SuggestedRemedy*

They should be 'Slope = -20 dB/dec'.

*Response* *Response Status* **C**

ACCEPT.
See comment #2293

*Cl* **75** *SC* **75.8** *P* **74** *L* **12** # 1600

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *:s, Labels in 75-11 and 75-12*

In Figures 75-11 and 75-12 the "Slope = " label is corrupted

*SuggestedRemedy*

Change to "Slope = -20 dB/dec"

*Response* *Response Status* **C**

ACCEPT.
See comment #2293

*Cl* **75** *SC* **75.8** *P* **74** *L* **12** # 2353

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *:s, Labels in 75-11 and 75-12*

Typo.

*SuggestedRemedy*

Both Figure 75-11 and 75-12 have a font issue with the text related to the slope value.

*Response* *Response Status* **C**

ACCEPT.
See comment #2293

*Cl* **75** *SC* **75.8** *P* **74** *L* **13** # 2002

Brown, Alan Wave7 Optics, Inc.

*Comment Type* **ER** *Comment Status* **A** *s, Labels in 75-11 and 75-12*

Garbage characters describe slope in Figure 75-11.

*SuggestedRemedy*

Correct the figure.

*Response* *Response Status* **C**

ACCEPT.
See comment #2293

*Cl* **75** *SC* **75.8** *P* **74** *L* **25** # 2003

Brown, Alan Wave7 Optics, Inc.

*Comment Type* **ER** *Comment Status* **A** *s, Labels in 75-11 and 75-12*

Garbage characters describe slope in Figure 75-12.

*SuggestedRemedy*

Correct the figure.

*Response* *Response Status* **C**

ACCEPT.
See comment #2293

*Cl* **75** *SC* **75.8** *P* **74** *L* **34** # 1759

Hirth, Ryan Teknovus

*Comment Type* **T** *Comment Status* **A** *rmative Annexes, Clause 75.*

The downstream jitter budgets should be updated with the results from the jitter adhoc.

*SuggestedRemedy*

update table 75-14. remove note "These are preliminary jitter values based on simulations @BER=10-12 and need to be finalized"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
(1) Replace Table 75-14 and Table 75-15 with tables from 3av_0809_kozaki_2.pdf, slide 22, including all the footnotes.
(2) Add a note to each table with the text "Jitter measurements should be performed at nominal operating conditions"
(3) Replace in footnotes in 3av_0809_kozaki_2.pdf, slide 22, use full names of test points (i.e., TP1, TP2 etc.)

Approve the above response:
Yes: 19
No: 0
Abstain: 1

(4) Remove the last footnote in 3av_0809_kozaki_2.pdf, slide 22, applicable to Table 75-14 and Table 75-15.

*Cl* **75** *SC* **75.8** *P* **74** *L* **35** # 2190

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *rmative Annexes, Clause 75.*

Tables 75-14 and Table 75-13 contain different allocations for jitter, with the upstream jitter allocation being more stringent than the downstream jitter allocation at TP3 and TP7. Why is this? Further, it is noted that a downstream external modulator is assumed to meet the jitter budget. Is it therefore necessary to also use an external modulator to meet the upstream jitter budget? If so, this can raise economic feasibility concerns. Is it ever possible to meet jitter budgets with directly modulated lasers? What BER should be used in the jitter simulation -- 1e-3 or 1e-12? It is stated that this is a preliminary table, so this is a comment intended to assist in the revision.

*SuggestedRemedy*

Clarfiy upstream and downstream jitter budgets, need for external modulator, the appropriate BER level for the jitter data, and results when a directly modulated laser is used in simulations.

*Response* *Response Status* **C**

REJECT.
[Subclause number was fixed]
[Page number was fixed]
Jitter budget was produced by dedicated jitter budget ad-hoc - please consult relevant TF materials.
See also comment #1759

*Cl* **75** *SC* **75.8** *P* **74** *L* **37** # 1719

Lin, Rujian Shanghai Luster Terab

*Comment Type* **TR** *Comment Status* **A** *rmative Annexes, Clause 75.*

75.8 Jitter at TP1-TP8 for PR10,PR20,PR30,PRX10,PRX20,PRX30(informative)
The text, Figures and Tables from line 3, page 74 to line 7, page 76 are arranged improperly, making the paragraphs difficult to be read and understood.
So this subcause needs modification. In addition, Figure 75-11 and Figure 75-12 look the same. They can be merged into one figure with the value of P and fc specified differently in Table 75-17 for PR10,PR20,PR30 and in Table 75-18 for PRX10,PRX20,PRX30

*SuggestedRemedy*

Propose to modify subcause 75.8 as shown in a file named 3av_0809_lin_1.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "ER" to "TR"]
[Page number was fixed]
Accept the submitted proposal as a baseline for further changes:
(1) omit text on page 4, it already belongs to 75.9
(2) apply comment #2077
(3) apply comment #2352

*Cl* **75** *SC* **75.8** *P* **74** *L* **4** # 2352

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *xes, Clause 75.8 jitter issues*

Typo.

*SuggestedRemedy*

Change 'For PR10, PR20, PR30 upstream jitter transfer function ..' to read 'For PR10, PR20, PR30 the upstream jitter transfer function ..'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change 'For PR10, PR20, PR30 upstream jitter transfer function ..' to read 'For PR10, PR20 and PR30, the upstream jitter transfer function ..'.

*Cl* **75** *SC* **75.8** *P* **74** *L* **47** # 2077

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *rmative Annexes, Clause 75.*

Either add new values based on a new contribution or keep existing values, if there are no new contributions. In either case, the statement "These are preliminary jitter values based on simulations @BER = 10-12 and need to be finalized" should not be part of the standard.

*SuggestedRemedy*

Remove the sentence "These are preliminary jitter values based on simulations @BER = 10-12 and need to be finalized"

The same on page 75, line 15

*Response* *Response Status* **C**

ACCEPT.
Implement into comment #1719

*Cl* **75** *SC* **75.8** *P* **74** *L* **48** # 1601

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *xes, Clause 75.8 jitter issues*

Tables 75-14 and 75-15 have a Note "These are preliminary jitter values based on simulations @BER = 10-12 and need to be finalized." This information should be shown in an Editor's note stating "to be removed prior to release"

*SuggestedRemedy*

Move these notes in to an "Editor's note"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "E" to "T"]
See comment #2077

*Cl* **75** *SC* **75.8** *P* **74** *L* **48** # 2371

Law, David 3Com

*Comment Type* **ER** *Comment Status* **A** *xes, Clause 75.8 jitter issues*

The first sentence of the notes to Table 75-14 belongs in an editions note and not in a note to the table.

*SuggestedRemedy*

Move the text 'These are preliminary jitter values based on simulations @BER = 10-12 and need to be finalized.' to an editors note.

Make the same change for Table 75-15, Page 75, line 15 and Table 75-16, Page 75, line 36.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2077 for Table 75-15 and Table 75-14. See comment #2078 for Table 75-16.

*Cl* **75** *SC* **75.8** *P* **74** *L* **9** # 2178

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **A** *s, Labels in 75-11 and 75-12*

Figures 75-11 and 75-12 appear to have formatting errors in slope indications.

*SuggestedRemedy*

correct formatting bug

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]
[Page number was fixed]

*Cl* **75** *SC* **75.8** *P* **75** *L* **1** # 1760

Hirth, Ryan Teknovus

*Comment Type* **T** *Comment Status* **A** *rmative Annexes, Clause 75.*

The upstream jitter budgets should be updated with the results from the jitter adhoc.

*SuggestedRemedy*

update table 75-15. Remove note "These are prelimanary jitter values based on simulations @BER10-12 and need to be finalized."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1759

*Cl* **75** *SC* **75.8** *P* **75** *L* **35** # 2078

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *xes, Clause 75.8 jitter issues*

Either add new values based on a new data or keep existing values, if there is no new data. In either case, the statement "These numbers are reproduced from IEEE 802.3ah specifications @@Table 60-11@@ and may be revised if supported by new data" should not be part of the standard.

*SuggestedRemedy*

Remove the sentence

*Response* *Response Status* **C**

ACCEPT.
Implement into comment #1719

*Cl* **75** *SC* **75.8** *P* **75** *L* **36** # 1602

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *xes, Clause 75.8 jitter issues*

The Note to Table 75-16 refers to "802.3ah" which will have been replaced by a revision of 802.3

*SuggestedRemedy*

change the note to: "These values are reproduced from Table 60-11 and may be revised if supported by new data." or better yet, delete it altogether.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2078

*Cl* **75** *SC* **75.9** *P* **76** *L* **10** # 2378

Law, David 3Com

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

The text reads 'In measuring TP1 and TP5 it is ..', in measuring what, I assume Jitter.

*SuggestedRemedy*

Change to read 'When measuring Jitter at TP1 and TP5 it is ..'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the offending text to read "When measuring jitter at TP1 and TP5, it is (.)"

*Cl* **75** *SC* **75.9** *P* **76** *L* **11** # 2354

Law, David 3Com

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

Make the frequency specifications parenthetical;, and use i.e. rather than viz.

*SuggestedRemedy*

Change the text '.. frequencies viz. 4 MHz for 10.3125 GBd receiver and 637 kHz for 1.25 GBd receiver are ..' to read '.. frequencies (i.e., 4 MHz for 10.3125 GBd receiver and 637 kHz for 1.25 GBd receiver) are ..'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.9** *P* **76** *L* **12** # 2355

Law, David 3Com

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

Typo, section should be subclause, and definitive is redundant, shall's define what is authoritative or not.

*SuggestedRemedy*

Change '.. The following sections describe definitive patterns and test procedures..' to read '.. The following subclauses describe patterns and test procedures ..'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.9.1** *P* **76** *L* **20** # 1932

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Would anyone really measure at 1270, 1577 or 1590 nm, or would he use the usual wavelengths of 1310 and 1550 nm, and predictive equations for the other wavelengths?

*SuggestedRemedy*

?

*Response* *Response Status* **C**

REJECT.
The text states that the attenuation is given for these wavelengths (central wavelengths of utilized data channels). The way of obtaining these values can be either through direct measurement or through predictor models. The use of preditor models cannot be restricted in this draft.

*Cl* **75** *SC* **75.9.1** *P* **76** *L* **21** # 1656

Anslow, Peter Nortel Networks

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

Reference is made to G.650.1 which is not in the references section

*SuggestedRemedy*

Add a reference to G.650.1

*Response* *Response Status* **C**

ACCEPT.
Add a reference to C01/1.3 with the following contents "ITU-T Recommendation G.650.1, 2004-Transmission media characteristics - Optical fibre cables". Sort remaining entries as appropriate.

*Cl* **75** *SC* **75.9.11** *P* **79** *L* **36** # 1720

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **R**

Receiver sensitivity is defined for the random pattern test frame, or.....

*SuggestedRemedy*

Correction: Receiver sensitivity is defined using the random pattern test frame, or.....

*Response* *Response Status* **C**

REJECT.
Original sentence reads well.

*Cl* **75** *SC* **75.9.11** *P* **79** *L* **39** # 1608

Anslow, Peter Nortel Networks

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

This says "The sensitivity shall be met for the bit error ratio defined in Table 75-6, Table 75-7, and Table 75-11 as appropriate." but only one table applies to a particular PMD

*SuggestedRemedy*

Change "and" to "or" to give "The sensitivity shall be met for the bit error ratio defined in Table 75-6, Table 75-7, or Table 75-11 as appropriate."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.9.12** *P* **79** *L* **44** # 2191

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **A** *ESSED], Page 79, line 44-45*

In this section it is stated "If stressed receiver compliance is necessary...", but in the 3 tables referenced, it is stated that stressed receiver performance is mandatory. Why would stressed receiver performance NOT be needed? This should be clarified.

*SuggestedRemedy*

Clarify whether stressed receiver performance is mandatory or not.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Subclause number was fixed]
[Page number was fixed]

"Compliance with stressed receiver sensitivity is mandatory for 10GBASE-PR-D1, 10GBASE-PR-D2, 10GBASE-PR-D3, 10GBASE-PR-U1, 10GBASE-PR-U3, 10/1GBASE-PRX-D3, 10/1GBASE-PRX-U1, 10/1GBASE-PRX-U2 and 10/1GBASE-PRX-U3 PMDs. The stressed receiver conformance test is intended to screen against receivers with poor frequency response or timing characteristics which could cause errors when combined with a distorted but compliant signal. To be comliant with stressed receiver sensitivity parameter, the receiver shall meet the specified bit error ratio at the power level and signal quality defined in Table 75-6, Table 75-7, and Table 75-11 as appropriate, according to the measurement procedures of 58.7.11 for 1 Gb/s PHYs and 52.9.9 for 10 Gb/s PHYs."

In Table 75-7, move footnote a) from parameter column to column PRX-D3 for parameter "Stressed receive sensitivity OMA (max)".

*Cl* **75** *SC* **75.9.12** *P* **79** *L* **45** # 1609

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *Page 79, line 44-45*

This says "the receiver shall meet the specified bit error ratio at the power level and signal quality defined in Table 75-6, Table 75-7, and Table 75-11 as appropriate," but only one table applies to a particular PMD

*SuggestedRemedy*

Change "and" to "or" to give "the receiver shall meet the specified bit error ratio at the power level and signal quality defined in Table 75-6, Table 75-7, or Table 75-11 as appropriate,"

*Response* *Response Status* **C**

ACCEPT.
See alco comment #2191

*Cl* **75** *SC* **75.9.15** *P* **80** *L* **11** # 1721

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

value is

*SuggestedRemedy*

Correction: its value is

*Response* *Response Status* **C**

ACCEPT.
[Line number was fixed]
Lines number 11, 13 and 18 are affected.

*Cl* **75** *SC* **75.9.15** *P* **80** *L* **15** # 2179

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*

Several specifications are included that are appropriate to burst mode receiver operation. For clarity, it might be helpful to relabel these sections or include a note that collects these into 'burst mode receive parameters'

*SuggestedRemedy*

Consider reference to relevant parameters for burst mode receive operation.

*Response* *Response Status* **C**

REJECT.
[Subclause number was fixed]
[Page number was fixed]
It is not really clear what is suggested in this comment. C75 is modelled after C60.

*Cl* **75** *SC* **75.9.15** *P* **80** *L* **15** # 1722

Lin, Rujian Shanghai Luster Terab

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

value

*SuggestedRemedy*

Correction: its value is

*Response* *Response Status* **C**

ACCEPT.
See comment #1721

*Cl* **75** *SC* **75.9.15** *P* **80** *L* **15** # 2361

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED], joint*

CDR lock is labeled Tcdr here, in subclause 76.2.2.5 and subclause 77.3.3.2 yet elsewhere labeled TCDR, subclause 76.3.2.1 and 76.2.2.1.1 are just two examples.

*SuggestedRemedy*

Assuming these are the same use the same label.

*Response* *Response Status* **C**

ACCEPT.
TCDR will be used, where "CDR" is subscripted.
Go through all accurences to make sure that TCDR is capitalized.

*Cl* **75** *SC* **75.9.15** *P* **80** *L* **16** # 1723

Lin, Rujian Shanghai Luster Terab

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

value is less than...

*SuggestedRemedy*

Correction: with a value less than...

*Response* *Response Status* **C**

ACCEPT.
See comment #1721

*Cl* **75** *SC* **75.9.2** *P* **76** *L* **23** # 1771

KIMURA, Mitsunobu Hitachi Communicatio

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

In the title of 75.9.2, "10G EPON PMDs" should be "10G-EPON PMDs".

*SuggestedRemedy*

"10G-EPON PMDs"

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **75** *SC* **75.9.2** *P* **76** *L* **25** # 2356

Law, David 3Com

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

Not sure what a 'Clause 75 receiver' is. Mirror text used on line 27 for transmitters.

*SuggestedRemedy*

Change the text 'The Clause 75 receivers are required ..' to read 'All the receiver types specified in Clause 75 are required ..'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.9.2** *P* **76** *L* **27** # 2379

Law, David 3Com

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

This is the only use of the term 'PON Plant' - the term used elsewhere in the draft is the channel.

*SuggestedRemedy*

Change the text '.. the PON plant ..' to read '.. the channel ..'.

*Response* *Response Status* **C**

ACCEPT.
- not really sure how it impacts draft technically

*Cl* **75** *SC* **75.9.2** *P* **76** *L* **27** # 1659

Anslow, Peter Nortel Networks

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The TDP (max) in Table 75-8 is 3.0 dB and the note to this table says that the transmitter power can be reduced if TDP is smaller than this, but subclause 75.9.2 states "All the transmitter types specified in Clause 75 introduce less than 1 dB of optical path penalty over the PON plant. An increase in the optical path penalty is acceptable, provided that any increase in optical path penalty over 1 dB is compensated by an increase of the minimum transmitter OMA."
These seem to be inconsistent.

*SuggestedRemedy*

Modify subclause 75.9.2 to be consistent with the Tables or
Modify the tables to be consistent with subclause 75.9.2

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
In subclause 75.9.2 delete
"An increase in the optical path penalty is acceptable, provided that any increase in optical path penalty over 1 dB is compensated by an increase of the minimum transmitter OMA."

*Cl* **75** *SC* **75.9.2** *P* **76** *L* **31** # 1772

KIMURA, Mitsunobu Hitachi Communicatio

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

"Table 75-5, Table75-8, Table75-9" needs "and".

*SuggestedRemedy*

"Table 75-5, Table75-8, and Table75-9"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Subclause number was fixed]
"Table 75-5, Table 75-8, and Table 75-9"

---

*Cl* **75** *SC* **75.9.3** *P* **76** *L* **35** # 2372

Law, David 3Com

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

Compliance is to be achieved be meeting the normative requirements of the standard as described by the shall statements.

*SuggestedRemedy*

Delete the text 'Compliance is to be achieved in normal operation.'.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **75** *SC* **75.9.3** *P* **76** *L* **35** # 2380

Law, David 3Com

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

This subclause states 'Two types of test patterns are used, square wave (52.9.1.2) and other (52.9.1.1) for testing ..'. I however don't see any test pattern called 'other' defined in 52.9.1.1, as stated at the start of that subclause 'Patterns 1, 2, and 3 are defined in Table 52-21. Pattern 3 is optional.'.

*SuggestedRemedy*

Please match this reference to the patterns defined in 52.9.1.1.

*Response* *Response Status* **C**

ACCEPT.
Change:
'Two types of test patterns are used, square wave (@@Subclause 52.9.1.2@@) and other (@@Subclause 52.9.1.1@@) for testing of 10 Gb/s optical PMDs.'
to
'Two types of test patterns are used for testing of 10 Gb/s optical PMDs: square wave (52.9.1.2) and patterns 1, 2 or 3 (52.9.1.1).'

---

*Cl* **75** *SC* **75.9.4** *P* **76** *L* **43** # 1933

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *SED], ANSI/TIA/EIA-455-127*

ANSI/EIA/TIA-455-127 is obsolete (There is an IEC spec in preparation but I don't think it will be final in time for this project and can't say if it is appropriate).

*SuggestedRemedy*

Replace with TIA-455-127-A, adjust the PICS. Add to 1.3 Normative references, TIA-455-127-A-2006, FOTP-127-A-Basic Spectral Characterization of Laser Diodes. If you are good citizens, in 1.3, delete "ANSI/EIA/TIA-455-127-1991, FOTP-127-Spectral Characterization of Multimode Laser Diodes." and make appropriate changes to 38.6.1, 52.9.2, 58.7.2, 59.7.2 and 60.7.2 (I can tell you what I think those changes are)

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Clause 38, 52, 48, 58, 59, 60 are not in scope for our PAR.

(1) Replace with TIA-455-127-A, adjust the PICS

(2) Add to 1.3 Normative references, "TIA-455-127-A-2006, FOTP-127-A-Basic Spectral Characterization of Laser Diodes".

---

*Cl* **75** *SC* **75.9.4** *P* **76** *L* **43** # 1603

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *ANSI/TIA/EIA-455-127*

This says "The center wavelength and spectral width (RMS) shall meet specifications according to ANSI/TIA/EIA-455-127 under modulated conditions ..." which reads as if the specifications are from ANSI/TIA/EIA-455-127 rather than the measurement methods.

*SuggestedRemedy*

change to "The center wavelength and spectral width (RMS) shall meet the specifications when measured according to ANSI/TIA/EIA-455-127 under modulated conditions ..."

*Response* *Response Status* **C**

ACCEPT.
See comment #1933

*Cl* **75** *SC* **75.9.4** *P* **76** *L* **49** # 1604

Anslow, Peter Nortel Networks

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

Note 2 is "The 20 dB width for SLM lasers is taken as 6.07 times the RMS width." but the 20 dB width is not used

*SuggestedRemedy*

Delete Note 2

*Response* *Response Status* **C**

ACCEPT.
[Changed from "E" to "T"]

*Cl* **75** *SC* **75.9.6** *P* **77** *L* **35** # 1605

Anslow, Peter Nortel Networks

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

The text says "Extinction ratio shall meet specifications according to IEC 61820-2-2 with the port transmitting ..." which reads as if the specifications are from IEC 61820-2-2 rather than the measurement methods.

*SuggestedRemedy*

Change to "The extinction ratio shall meet the specifications when measured according to IEC 61820-2-2 with the port transmitting ..."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **75** *SC* **75.9.7** *P* **77** *L* **43** # 1606

Anslow, Peter Nortel Networks

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

The second sentence is "A description of OMA measurements for 10 Gb/s PHYs shall be compliant with the description found in @@Subclause 52.9.5@@.". This seems to be placing a requirement on a description rather than a measurement.

*SuggestedRemedy*

Change to "The OMA measurements for 10 Gb/s PHYs shall be compliant with the description found in Subclause 52.9.5."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the offending text to read: "The OMA measurements for 10 Gb/s PHYs shall be compliant with the description found in 52.9.5."

*Cl* **75** *SC* **75.9.9** *P* **78** *L* **24** # 2079

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *' and Figure 75-14 references*

Figures 75-13 and 75-14 are different, but have the same titles and no further explanation in text.

*SuggestedRemedy*

Add text to the titles to explain that the figures represent different line rates.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #1607 for changes in the accompanying text.
Change title for Figure 75-13 to read "Transmitter eye mask definition for 1 Gb/s PMDs"
Change title for Figure 75-14 to read "Transmitter eye mask definition for 10 Gb/s PMDs"

*Cl* **75** *SC* **75.9.9** *P* **78** *L* **3** # 1607

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *' and Figure 75-14 references*

The first sentence is: "The required transmitter pulse shape characteristics are specified in the form of a mask of the transmitter eye diagram as shown in Figure 75-13 and Figure 75-14."
However it is unclear which diagram relates to which transmitter types.

*SuggestedRemedy*

"The required transmitter pulse shape characteristics are specified in the form of a mask of the transmitter eye diagram as shown in Figure 75-13 for 1 Gb/s PHYs and Figure 75-14 for 10 Gb/s PHYs."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the indicated text to read: "The required transmitter pulse shape characteristics are specified in the form of a mask of the transmitter eye diagram as shown in Figure 75-13 for 1 Gb/s PMDs and Figure 75-14 for 10 Gb/s PMDs."

*Cl* **76** *SC* *P* **99** *L* **27** # 1774

KIMURA, Mitsunobu Hitachi Communicatio

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

Titles od Figure 76-3 and 76-4 have periods (".").

*SuggestedRemedy*

The periods should be removed.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 1773

*Cl* **76** *SC* **1.6.1.5** *P* **102** *L* **39** # 1776
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
A period is missed.

*SuggestedRemedy*
A period should be placed.

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

*Cl* **76** *SC* **2.2.1.5** *P* **110** *L* **39** # 1777
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *reword*
"a state machines" and "the state machines" should be replaced as "a state diagram" and "the state diagram".

*SuggestedRemedy*
"a state diagram"; "the state diagram".

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

*Cl* **76** *SC* **2.2.4.1** *P* **113** *L* **29** # 1778
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
Font of "P(x)" is not proper.

*SuggestedRemedy*
Font of "P(x)" should be the same one as of the equation after "vector".

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

*Cl* **76** *SC* **2.2.5** *P* **116** *L* **19** # 1779
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
Two periods are shown.

*SuggestedRemedy*
A period should be removed.

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

*Cl* **76** *SC* **2.2.5** *P* **117** *L* **46** # 1780
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
Two spaces are shown between "by two".

*SuggestedRemedy*
A space should be removed.

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

*Cl* **76** *SC* **2.2.5.1** *P* **118** *L* **41** # 1781
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
The last word of the sentence "A 66-bit ..." is "transmissino" and has no period.

*SuggestedRemedy*
Should be "transmission."

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

*Cl* **76** *SC* **2.3.4.4** *P* **134** *L* **51** # 1782
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
The first word of the sentence is "TThe".

*SuggestedRemedy*
Should be "The".

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

*Cl* **76** *SC* **2.3.7.1** *P* **136** *L* **24** # 1783
KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *typo*
Between the words "Subclause" and "76.2.2.1.1", there is no space.

*SuggestedRemedy*
Should be "Subclause 76.2.2.1.1."

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

*Cl* **76** *SC* **3** *P* **137** *L* **29** # 1784
KIMURA, Mitsunobu Hitachi Communicatio

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

"100BASEPX" is shown. A hyphen should be placed between BASE and PX.

*SuggestedRemedy*

Should be "1000BASE-PX".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **4.3** *P* **141** *L* **27** # 1785
KIMURA, Mitsunobu Hitachi Communicatio

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

In the "Item" cell, "FECEncoder" is shown. A hyphen should be placed between FEC and Encoder.

*SuggestedRemedy*

Should be "FEC-Encoder".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **4.4.7** *P* **144** *L* **1** # 1786
KIMURA, Mitsunobu Hitachi Communicatio

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

In the title of 76.4.4.7, "state machines" is shown.

*SuggestedRemedy*

Should be "state diagrams".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76** *P* **95** *L* **1** # 1936
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Title is FAR too long. One should try to keep the title so that it is just one line long in the contents Should mention FEC as it is such an important feature here

*SuggestedRemedy*

Change title to "RS, PCS with FEC, and PMA, for 10G-EPON"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to:
Reconciliation Sublayer, Physical Coding Sublayer and Physical Media Attachment for 10G-EPON.

*Cl* **76** *SC* **76** *P* **95** *L* **1** # 2308
Hajduczenia, Marek Nokia Siemens Networ

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

In Clause 76, term "Reconciliation sublayer" is used interchangeably with "Reconciliation Sublayer". Align the capitalization for all terms and then align them through the whole draft.

*SuggestedRemedy*

In Clause 76, term "Reconciliation sublayer" is used interchangeably with "Reconciliation Sublayer". Align the capitalization for all terms and then align them through the whole draft.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Use "Reconciliation Sublayer"

*Cl* **76** *SC* **76** *P* **95** *L* **30** # 1937
Dawe, Piers Avago

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

Need to mention FEC in the introduction to this clause. PMA = Physical Medium Attachment not Physical Media Attachment

*SuggestedRemedy*

This Clause describes the Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS) with mandatory RS(255, 223) FEC), and Physical Medium Attachment (PMA) sublayer used with 10GBASE-PR and 10/1GBASE-PRX point-to-multipoint (P2MP) networks.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
This Clause describes the Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS) with FEC, and Physical Medium Attachment (PMA) sublayer used with 10GBASE-PR and 10/1GBASE-PRX point-to-multipoint (P2MP) networks.

*Cl* **76** *SC* **76.1** *P* **95** *L* **37** # 1938
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A**
"76.1 Reconciliation Sublayer (RS)": need a more specific title, as there are many RSs

*SuggestedRemedy*
76.1 Reconciliation Sublayer (RS) for 10G-EPON

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

*Cl* **76** *SC* **76.1** *P* **96** *L* **1** # 1812
D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*
inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*
make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**
REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **76** *SC* **76.1** *P* **97** *L* **1** # 1813
D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *[TO BE PROCESSED]*
inconsistencies between this figure and how things are done in architectural positioning diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*
make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**
REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **76** *SC* **76.1.1** *P* **95** *L* **40** # 2012
Frazier, Howard Broadcom

*Comment Type* **E** *Comment Status* **A**
Decapitalize "Subclause".

*SuggestedRemedy*
per comment.

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

*Cl* **76** *SC* **76.1.1** *P* **95** *L* **41** # 2081
Kramer, Glen Teknovus, Inc.

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

Sentence uses "at one data rate" and "in another data rate"

*SuggestedRemedy*
Replace "in" with "at"

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

*Cl* **76** *SC* **76.1.1** *P* **95** *L* **42** # 1724
Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A**
receive in...

*SuggestedRemedy*
Correction: receiving at

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

*Cl* **76** *SC* **76.1.1** *P* **96** *L* **15** # 2150
Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*
In Figure 76-1, the dotted line separating PCS and FEC does not go across the entire box. In Figure 76-2, it does. Please make consistent.

*SuggestedRemedy*
Extend dotted line through entire box.

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Will scrutinize this and correct (if necessary).

*Cl* **76** *SC* **76.1.1** *P* **96** *L* **45** # 2149

Lynskey, Eric Teknovus

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

In Figure 76-1, the label incorrectly includes Clause 75. The PMD is not highlighted in the figure.

*SuggestedRemedy*

Remove "Clause 75".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.1** *P* **96** *L* **45** # 2019

Frazier, Howard Broadcom

*Comment Type* **ER** *Comment Status* **A** *DupTxtp96*

in Figure 76-1, "Clause 76Clause75" should be "Clause 76".

*SuggestedRemedy*

Delete extraneous "Clause 75".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.1** *P* **96** *L* **45** # 2180

Woodward, Ted Telcordia Technologie

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

Figure 76-1 has a typographical error in the legend indicating that hatched region is "described in Clause 76Clause 75"

*SuggestedRemedy*

remove extraneous Clause 75 reference

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.2** *P* **98** *L* **3** # 2020

Frazier, Howard Broadcom

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

Please don't use the word "bridge" to describe the interface between the MAC and the PHY. "Bridge" has a specific meaning in IEEE 802 standards.

*SuggestedRemedy*

delete the words "used to bridge" in two places in this paragraph.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Replace "interface used to bridge between"
with "interface used to transfer data between"

*Cl* **76** *SC* **76.1.2** *P* **98** *L* **3** # 1613

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *˙O BE PROCESSED], reword*

This says "In legacy EPON architectures, the GMII is the interface used ..."
The term "legacy" suggests that EPON is out of date.

*SuggestedRemedy*

change to "In EPON architectures, the GMII is the interface used ..."

*Response* *Response Status* **C**

ACCEPT.
Moved to c76
Change to "legacy EPON" to "1G-EPON"

*Cl* **76** *SC* **76.1.2.3** *P* **98** *L* **37** # 2304

Hajduczenia, Marek Nokia Siemens Networ

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

Style of this paragraph is significantly different than the style of other paragraphs in the draft. Apply the same style as in paragraph 76.1.2.1 for example.

*SuggestedRemedy*

Apply the same style to paragraph 76.1.2.3 as in paragraph 76.1.2.1 for example.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.2.3** *P* **98** *L* **39** # 2192

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

This section appears incomplete and does not describe much about dual rate mode. Perhaps it is intended for most of this discussion to take place in clause 77, but more could probably be said about dual rate mode in both this clause as well as in clause 75. Further, the related figure 76-4 has typographical formatting corrections in the MAC descriptions.

*SuggestedRemedy*

Describe dual rate mode options more completely. Correct formatting errors in Fig. 76-4

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add cross reference to c77 in subclause 76.1.2.3.
Change gold (Au) MAC's to Gb/s MACs

---

*Cl* **76** *SC* **76.1.2.3** *P* **98** *L* **39** # 2082

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

The paragraph in this section seems to use a style different from other sections (line spacing is different)

*SuggestedRemedy*

Check the style and make consistent

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.1.2.3** *P* **99** *L* **1820** # 1725

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

In ONU parts of Figure 76-3(a) and (b), Characters TX and RX are positioned wrong.

*SuggestedRemedy*

Correction: In ONU parts of Figure 76-3(a) and (b), the positions of TX and RX are interchanged.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.1.2.3** *P* **99** *L* **31** # 2013

Frazier, Howard Broadcom

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

If Figure 76-4, there are some strange characters in the rectangles across the top of the figure. I can't tell what they should be.

*SuggestedRemedy*

replace with correct characters.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.1.2.3** *P* **99** *L* **31** # 2305

Hajduczenia, Marek Nokia Siemens Networ

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

There are funny characters in Figure 76-4 in MAC name. It says currently "1G'ÄìMAC" or "10G'ÄìMAC" whereas it should say "1G-MAC" or "10G-MAC", respectively.

*SuggestedRemedy*

Change "1G'ÄìMAC" and "10G'ÄìMAC" to "1G-MAC" and "10G-MAC", respectively, in Figure 76-4.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.2.3** *P* **99** *L* **32** # 181546

Lynskey, Eric Teknovus

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

Figure 76-4 has corrupted speed labels for MACs.

*SuggestedRemedy*

Replace speeds with the following (left to right):
1G-1G, 1G-1G, 10G-1G, 10G-1G, 10G-10G, 10G-10G
OR
1 Gb/s, 1 Gb/s, 10/1 Gb/s, 10/1 Gb/s, 10 Gb/s, 10 Gb/s

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
The figure appears to be correct now.

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

(was against c76)

==========

*Cl* **76** *SC* **76.1.2.3** *P* **99** *L* **52** # 2083

Kramer, Glen Teknovus, Inc.

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

Primitive name is not correct

*SuggestedRemedy*

PLS.DATA should be PLS_DATA

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.3** *P* **100** *L* **10** # 2084

Kramer, Glen Teknovus, Inc.

*Comment Type* **ER** *Comment Status* **A** *dupTxtp100*

These two paragrphas repeat the same thing. Change the text as shown in the remedy.

The statement about single PLS_DATA.request primitive being active at any time is only important for the OLT, since this is where the multiple MAC connecr to single (X)GMII. Move this statement after the OLT sentence.

*SuggestedRemedy*

Perlace 2nd and 3rd paragraphs with the following text:

"As described in Subclause @@77.1.2@@, multiple MACs within an OLT are bound to a single XGMII, in case of a symmetric OLT, or to an XGMII transmit path and a GMII receive path, in case of an asymmetric OLT. Correspondingly, only one PLS_DATA.request primitive is active at any time.

At the ONU, the MAC is either bound to an XGMII, in case of a symmetric ONU, or to an XGMII receive path and a GMII transmit path, in case of an asymmetric ONU."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
The Editor shall replace the indicated text as he does not know how to "Perlace"

*Cl* **76** *SC* **76.1.3** *P* **100** *L* **15** # 2366

Law, David 3Com

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

Paragraph 2 states 'At the ONU the MAC is either bound to an XGMII or to an XGMII receive path and a GMII transmit path.'

Paragraph 3 then states 'For 10G links, the mechanism is extended to allow the MAC to be bound to a single XGMII, or to a GMII transmit path and an XGMII receive path (in the case of an asymmetric ONU) ..'

Paragraph 3 seems to be a restatement of content in paragraph 2.

*SuggestedRemedy*

Delete paragraph 3.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution from comment 2084.

*Cl* **76** *SC* **76.1.3** *P* **100** *L* **24** # 2397

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], joint*

A 'frame' or 'MAC frame' is from the Destination Address to Frame Check Sequence inclusive, a 'packet' or 'MAC packet' is a MAC frame plus Preamble, Start Frame Delimiter and Extension.

Based on this there are a number of changes suggested below:

*SuggestedRemedy*

Page 100, line 24: Change '.. within the preamble identify the MAC to which this frame should be directed.' to read '.. within the preamble identify the MAC to which this packet should be directed.'. (See IEEE Std 802.3as-2006 Figure 3-1).

Page 101, line 3: Chnage '.. to defer the MAC between frames in order ..' to read ".. to defer the MAC between packets in order ..' (See IEEE Std 802.3as-2006 4.2.3.2.1).

Page 102, line 5: Change '.. enough time is inserted between frames transmitted by different ..' to read '.. enough time is inserted between packets transmitted by different ..'. (See IEEE Std 802.3as-2006 4.2.3.2.2)

Page 108, line 40: Change '.. the minimum IPG has been preserved between two adjacent frames.' to read '.. the minimum IPG has been preserved between two adjacent packets.'. (See IEEE Std 802.3as-2006 4.2.3.2.2)

Page 108, line 43: Chnage '.. start of the first frame in a burst, such ..' to read '.. start of the first packet in a burst, such ..' as I belive that it is a burst of packets that are sent by ONUs to the OLT.

Page 109, line 39: Chnage '.. that preceed the first frame in the burst.' to read '.. that preceed the first packet in the burst.'.

Page 136, line 8: Change '.. inserted between MAC frames and not necessarily ..' to read '.. inserted between packets and not necessarily ..'.

Page

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.3.1** *P* **100** *L* **30** # 2085

Kramer, Glen Teknovus, Inc.

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

grammar

*SuggestedRemedy*

Insert commans after the "chip-to-chip" and "independence"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.3.1** *P* **100** *L* **32** # 2306

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Do not divide the PMD names, especially the name of PRX type PMDs. It makes the reading harder, e.g.
"media independence so that an identical media access controller may be used with all 10GBASE-PR and 10/
1GBASE-PRX PHY types."
Another example on page 105, line 52, page 107 line 44, page 124 line 2

*SuggestedRemedy*

Force a line break before the PMD name if it does not fit in the line completely.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.3.2** *P* **100** *L* **37** # 2086

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

From simulations it does not appear that RS, PCS, and PMA can have delay variability of no more than 1 TQ.

Need to clarify that this variability is in one direction, not round-trip.

*SuggestedRemedy*

Change the text as follows:

"The MPCP relies on strict timing based on the distribution of timestamps. The actual delay is implementation dependent, but, to comply with this mechanism, an implementation shall maintain a combined delay variation through RS, PCS, and PMA sublayers of no more than 2 TQ in the transmit direction and no more than 2 TQ in the receive direction."

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

Review with c77

*Cl* **76** *SC* **76.1.3.2** *P* **100** *L* **39** # 1939

Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

"TQ" is used just once in normative text, and twice in PICS 75.12.3

*SuggestedRemedy*

Here, spell it out: one time-quantum (16 ns). Can leave PICS as is because there's a reference to a subclause that makes it clear

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"TQ" to be replaced with "time_quantum"
See resolution to comment #2021

*Cl* **76** *SC* **76.1.3.2** *P* **100** *L* **39** # 1614

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

This says "of no more than 1 TQ so as to comply", but TQ is not in the abbreviations list

*SuggestedRemedy*

Add "TQ" to the abbreviations list

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"TQ" to be replaced with "time_quantum"
See resolution to comment #2021

*Cl* **76** *SC* **76.1.3.2** *P* **100** *L* **39** # 2021

Frazier, Howard Broadcom

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*

Don't use the abbreviation TQ for time_quantum.

*SuggestedRemedy*

change "TQ" to "time_quantum" and add a cross-reference to 72.2.2.1

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.6** *P* **101** *L* **0** # 2307

Hajduczenia, Marek Nokia Siemens Networ

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

Table 76-1 and Table 76-2 are affected. There are unsually large spaces between individual tables and blocks of surrounding text. Please remove extra spaces and align the Frame styles, if necessary.

*SuggestedRemedy*

Please remove extra spaces between Table 76-1 and Table 76-2 and the accompanying text. Align Frame styles, if necessary.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Will beat on frame

*Cl* **76** *SC* **76.1.6** *P* **101** *L* **12** # 1615

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *PROCESSED], reword, joint*

Table 76-1 uses the term "Legacy (Tx: 1 Gb/s)" which suggests that 1G EPON is out of date.

*SuggestedRemedy*

change both occurences of "Legacy (Tx: 1 Gb/s)" to "EPON (Tx: 1 Gb/s)""

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c76
Replace "legacy" with "1G-EPON" as appropriate

*Cl* **76** *SC* **76.1.6** *P* **101** *L* **28** # 1616

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *O BE PROCESSED], reword*

Table 76-2 uses the term "Legacy (Rx: 1 Gb/s)" which suggests that 1G EPON is out of date.

*SuggestedRemedy*

change both occurences of "Legacy (Rx: 1 Gb/s)" to "EPON (Rx: 1 Gb/s)""

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c76
See resolution to comment 1615

*Cl* **76** *SC* **76.1.6** *P* **101** *L* **3** # 1775

KIMURA, Mitsunobu Hitachi Communicatio

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

A period is missed.

*SuggestedRemedy*

A period should be placed.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.6** *P* **101** *L* **30** # 1726

Lin, Rujian Shanghai Luster Terab

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

In Table 76-2, the following rows
OLT Asymmetric(Rx:10Gb/s) XGMII RXD<31:0>,RXC<3:0>,RX_CLK
ONU Asymmetric(Rx:1Gb/s) GMII RXD<7:0>,RX_ER,RX_DV,RX_CLK
are incorrect.

*SuggestedRemedy*

Correction:
OLT Asymmetric(Rx:1Gb/s) GMII RXD<7:0>,RX_ER,RX_DV,RX_CLK
ONU Asymmetric(Rx:10Gb/s) XGMII RXD<31:0>,RXC<3:0>,RX_CLK

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.6.1** *P* **101** *L* **36** # 2413

Mandin, Jeff PMC Sierra

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

There's been much discussion about the carrier sense logic in the RS. Among other considerations, the following is apparent:

* Carrier sense creates timestamp variation of 1.6 TQ, which greater than the 1 TQ specified by 1G (cf. 65.3.3). With properly defined FEC_overhead functions, it should be possible to reduce the FEC-insertion-related timestamp variation to 0.

* In the ONU, the carrier sense mechanism assumes insertion of parity on a constant basis. But the data detector resets where the parity is inserted for each burst.

* Carrier Sense can interact with delays in the stack to result in insertion of extra IDLEs between bursts - leading to suboptimal use of bandwidth

*SuggestedRemedy*

1. Delete subclause 76.1.6.1

2. On page 101, line 1: Delete the paragraph:

"As discussed in Subclause @@46.1.7.3@@, the PLS_CARRIER.indication primitive is not used for 10 Gb/s operation. However, 10G-EPON operation extends the 10 Gb/s RS by using the PLS_CARRIER.indication primitive to defer the MAC between frames in order to allow the PCS to insert FEC parity octets"

3. Revise the FEC_Overhead functions as described in 3av_0809_mandin_2.pdf

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

1. Delete subclause 76.1.6.1 except for subclause 76.1.6.1.4 (Conventions) (will be relocated to appropriate spot)

2. On page 101, line 1: Delete the paragraph:

"As discussed in Subclause @@46.1.7.3@@, the PLS_CARRIER.indication primitive is not used for 10 Gb/s operation. However, 10G-EPON operation extends the 10 Gb/s RS by using the PLS_CARRIER.indication primitive to defer the MAC between frames in order to allow the PCS to insert FEC parity octets"

*Cl* **76** *SC* **76.1.6.1.2** *P* **101** *L* **47** # 2398

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], CS*

A 'frame' or 'MAC frame' is from the Destination Address to Frame Check Sequence inclusive, a 'packet' or 'MAC packet' is a MAC frame plus Preamble, Start Frame Delimiter and Extension. Hence CARRIER_STATUS should be based on packets and not frames.

Also should be clear that CARRIER_ON is asserted at the beginning of every packet transmission.

*SuggestedRemedy*

Change the text '.. assumes the value CARRIER_ON at the beginning of every frame and assumes the value of CARRIER_OFF after frame transmission is complete ..' to read '.. assumes the value CARRIER_ON at the beginning of every packet transmission and assumes the value of CARRIER_OFF after packet transmission is complete ..'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment # 2413
Section was effectively removed.

*Cl* **76** *SC* **76.1.6.1.3** *P* **101** *L* **6** # 2181

Woodward, Ted Telcordia Technologie

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

repeated word '...bound the the XGMII ....'

*SuggestedRemedy*

Substitute 'to' for duplicate word

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.6.1.3** *P* **102** *L* **5** # 2087

Kramer, Glen Teknovus, Inc.

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

Use consistent primitive naming

*SuggestedRemedy*

use PLS_CARRIER.indication (lower case "i")

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.1.6.1.4** *P* **101** *L* **12** # 2309

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

"The notation -= after a counter indicates that the counter value is to be decremented by the following value. The notation += after a counter indicates it is to sum itself with the following value." - these two definitions should be symmetric.

*SuggestedRemedy*

Change "The notation -= after a counter indicates that the counter value is to be decremented by the following value. The notation += after a counter indicates it is to sum itself with the following value." to "The notation -= after a counter indicates it is to substract the following value from its value. The notation += after a counter indicates it is to add the following value to its value."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change:
"The notation += after a counter indicates it is to sum itself with the following value."
To:
"The notation += after a counter indicates that the counter value is to be incremented by the following value."

*Cl* **76** *SC* **76.1.6.1.5** *P* **101** *L* **15** # 2310

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The use of terms "XGMII transfer column" and "column" in this subsection should be clarified. It is suggested to add a new constant:
column_size
This constant represents the size of the XGMII transfer column in the units of bytes.
VALUE: 4
Modify the following definitions as proposed:
block_size > This constant represents the size of the FEC codeword, expressed in the units of column_size.
parity_cnt > This variable counts the amount of parity data to be inserted by the PCS. This variable is expressed in the units of column_size.
parity_ratio > The number of parity data columns to be inserted at the end of the given FEC codeword. This variable is expressed in the units of column_size.

*SuggestedRemedy*

Add a new constant:
column_size
This constant represents the size of the XGMII transfer column in the units of bytes.
VALUE: 4

Modify the following definitions as proposed:
block_size > This constant represents the size of the FEC codeword, expressed in the units of column_size.
parity_cnt > This variable counts the amount of parity data to be inserted by the PCS. This variable is expressed in the units of column_size.
parity_ratio > The number of parity data columns to be inserted at the end of the given FEC codeword. This variable is expressed in the units of column_size.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
The suggested clarification is a good idea.
Modify the following definitions in 76.1.6.1.5:
block_size > "This constant represents the size of the FEC codeword, expressed in the units of columns, where each column is 4 octets (the size of the XGMII transfer column)."

Parity_cnt > "This variable counts the amount of parity data to be inserted by the PCS. This variable is expressed in the units of columns, where each column is 4 octets (the size of the XGMII transfer column)."

parity_ratio > "The number of parity data columns to be inserted at the end of the given FEC codeword. This variable is expressed in the units of columns, where each column is 4 octets (the size of the XGMII transfer column)."

*Cl* **76** *SC* **76.1.6.1.6** *P* **103** *L* **30** # 2256

Ganga, Ilango Intel

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED], Else*

Update state diagram with conventions/notations defined in 1.2 (also see 21.5).

Replace else statement, pseudo code, etc., with appropriate logic.

Applies to Fig 76-5, Fig 76-10, Fig 76-11, Fig 76-19

*SuggestedRemedy*

As per comment

*Response* *Response Status* **U**

ACCEPT IN PRINCIPLE.
"else" to be replaced with "ELSE" in all state diagrams

*Cl* **76** *SC* **76.1.6.1.6** *P* **103** *L* **30** # 1752

LANDRY, MATTHEW SILICON LABS

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Logical equalities (=, <, >, etc.) should have operational precedence over logical AND (*), but it would be good to use parentheses to ensure no misunderstanding.

*SuggestedRemedy*

Replace terms like "CARRIER_STATUS = CARRIER_ON * parity_cnt > 0 * C_TYPE(col) = C" with "(CARRIER_STATUS = CARRIER_ON) * (parity_cnt > 0) * (C_TYPE(col) = C)"

This could apply to all state diagrams.

*Response* *Response Status* **C**

REJECT.
Changed from "E" to "T"
usage is consistent with IEEE Style Manual.

*Cl* **76** *SC* **76.1.6.2.1** *P* **104** *L* **10** # 2119

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *BE PROCESSED], ResLLID*

As the text is written now, a registered ONU could potentially have an LLID of 0x7FFF. Since we have set aside a range of addresses that cannot be used, perhaps we should state that in the definition.

*SuggestedRemedy*

Change to "Registered ONU MACs may use any value other than the reserved values listed in Table 76-4 for this variable." Also, update PICS item FS3 accordingly.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change to "Registered ONU MACs may be assigned any value other than the reserved values listed in Table 76-4 for this variable."

See comment #2120 for corrections to table 76-4.

*Cl* **76** *SC* **76.1.6.2.3.2** *P* **105** *L* **26** # 2120

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *BE PROCESSED], ResLLID*

More information should be provided on the reserved LLID values.

*SuggestedRemedy*

Replace the sentence starting "See Table 76-4..." with the following:
A number of LLIDs have been reserved for various purposes including downstream broadcast, discovery messages, and upstream registration request messages. An additional block of LLIDs has been set aside for future use and definition. Under normal conditions, a registered ONU will not transmit frames with one of these reserved LLIDs.

Replace table 76-4 with the following information:
0x7FFF - Reserved for 1G broadcast and registration.
0x7FFE - Reserved for 10G broadcast and registration.
0x7FED: - Reserved for future use.
0x7F00

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace sentence starting "See Table 76-4." with the following:
"A number of LLIDs have been reserved for various purposes including downstream broadcast, discovery messages, and upstream registration request messages. An additional block of LLIDs has been set aside for future use and definition. A registered ONU shall not transmit frames with one of these reserved LLIDs.

Update PICS

Update table per 3av_0809_kramer_4.pdf

*Cl* **76** *SC* **76.1.6.2.3.2** *P* **105** *L* **37** # 2311

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

Unless I am mistaken, 1000BASE-X does not have LLID extensions, thus footnotes a) and c) for Table 76-4 are incorrect. Instead of "1000BASE-X" they should read "1000BASE-PX"

*SuggestedRemedy*

Change "1000BASE-X" to "1000BASE-PX" in footnotes a) and c) for Table 76-4

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution of comment #2120.

---

*Cl* **76** *SC* **76.2** *P* **105** *L* # 1940

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

This strong FEC could be useful in future projects

*SuggestedRemedy*

Please be sure that it is clear how one would use this FEC in a point-to-point BASE-R link. For example, would one use the upstream version or the downstream version or the same mix as for a PON? Would anything have to be different? Make sure that there is a 10GBASE-R strong FEC control bit allocated (even if in 10G-EPON it would have no effect).

*Response* *Response Status* **C**

REJECT.
There is no reason to expect any changes would be required in potential future projects and therefore no change is required.
Furthermore, consideration for other, potential, projects is out of scope for the task force work. All working notes of the task force are public record and available to future potential projects.

Vote
Task agrees with the proposed resolution to Reject.
For: 22
Against: 0
Abstain: 2

---

*Cl* **76** *SC* **76.2** *P* **105** *L* **1** # 2193

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

The requirement for FEC resident in the ONU elements has a cost implication. While it does not have to be explicitly included in the standard itself, an economic validation that this feature can be done at reasonable cost is appropriate. Probably this has been done and is recorded in task force contributions, but I thought it was important enough to be worth mentioning here.

*SuggestedRemedy*

Ensure adequate economic feasibility for mandatory burst mode FEC enabled ONU elements has been provided.

*Response* *Response Status* **C**

REJECT.
Equipment cost was considered in adopting the FEC. It is believed by the TF that the cost of the FEC silicon is significantly less than the cost of the equivilent additional optical budget in the optical domain.
No change to the draft document is required by this comment.

---

*Cl* **76** *SC* **76.2.1.1** *P* **106** *L* **26** # 2151

Lynskey, Eric Teknovus

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

Figure 76-6 is incorrect. The box to the left of the PCS box should be labeled as the transmit function. The box to the right of the PCS box should be labeled as the receive function.

*SuggestedRemedy*

Replace with "10GBASE-PR Transmit Function" and "1000BASE-PX Receive function".

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.1.2** *P* **107** *L* **20** # 1617

Anslow, Peter Nortel Networks

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

Figure 76-8 includes two layers labelled "64/66b ENCODE" and "64/66b DECODE". These should be 64B/66B encode and decode.

*SuggestedRemedy*

Change "64/66b ENCODE" to "64B/66B ENCODE"
change "64/66b DECODE" to "64B/66B DECODE"

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.1.2** *P* **107** *L* **24** # 1941

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

If the FEC sub-sublayer does rate increase/decrease then the Idle Deletion / Idle Insertion does the opposite, so that the line rate and the RS rate are in the usual proportion.

*SuggestedRemedy*

In this and the next figure, either remove the "(rate increase)" and "(rate decrease)" or insert balancing ones in Idle Deletion and Idle Insertion

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Remove "(rate increase)" and "(rate decrease)"

---

*Cl* **76** *SC* **76.2.2** *P* **107** *L* **47** # 2312

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

"For both 10GBASE-PR and 10/1GBASE-PRX, the ONU PCS always operates in a burst mode." - this sentence is misleading. It may seem ONU operates in burst mode in DS direction as well.

*SuggestedRemedy*

Change
"For both 10GBASE-PR and 10/1GBASE-PRX, the ONU PCS always operates in a burst mode."
to
"For both 10GBASE-PR and 10/1GBASE-PRX, the ONU PCS always operates in a burst mode in transmit direction."

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2** *P* **107** *L* **49** # 2088

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *ROCESSED], 107-49 reword*

The sentence doesn't read right:

"The transmit direction of OLT PCS is illustrated in Figure 76-8 and in Figure 76-9 for the transmit direction of the ONU PCS"

*SuggestedRemedy*

rephrase as

"Figure 76-8 illustrates the transmit direction of OLT PCS Figure 76-9 illustrates the transmit direction of the ONU PCS."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Figure 76-8 illustrates the transmit direction of OLT PCS. Figure 76-9 illustrates the transmit direction of the ONU PCS.

---

*Cl* **76** *SC* **76.2.2** *P* **107** *L* **49** # 1618

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *ROCESSED], 107-49 reword*

The sentence "The transmit direction of OLT PCS is illustrated in Figure 76-8 and in Figure 76-9 for the transmit direction of the ONU PCS." is difficult to understand.

*SuggestedRemedy*

Change to "The transmit directions of the OLT PCS and the ONU PCS are illustrated in Figures 76-8 and 76-9 respectively.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c76
See resolution to comment #2088

---

*Cl* **76** *SC* **76.2.2** *P* **108** *L* **14** # 1619

Anslow, Peter Nortel Networks

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

Figure 76-9 includes two layers labelled "64/66b DECODE" and "64/66b ENCODE". These should be 64B/66B encode and decode.

*SuggestedRemedy*

change "64/66b DECODE" to "64B/66B DECODE"
Change "64/66b ENCODE" to "64B/66B ENCODE"

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.2.1** *P* **108** *L* **38** # 2313

Hajduczenia, Marek Nokia Siemens Networ

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

Why is IDLE DELETION process capitilized ? Idle Insertion or Carrier Sense was not ...

*SuggestedRemedy*

Change "IDLE DELETION" to "Idle Deletion" in all occurences.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1** *P* **108** *L* **49** # 2089

Kramer, Glen Teknovus, Inc.

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

typo

*SuggestedRemedy*

"specific" should be "specified"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1** *P* **108** *L* **49** # 1620

Anslow, Peter Nortel Networks

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

"associated state variables as specific in Subclause 76.2.2.1.1." would be better as "associated state variables as specified in Subclause 76.2.2.1.1."

*SuggestedRemedy*

change "specific" to "specified"

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.2.1** *P* **108** *L* **52** # 2090

Kramer, Glen Teknovus, Inc.

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

These sentences are technically incorrect:

"State diagram variables follow the conventions of @@Subclause 21.5.2@@ except when the variable has a default value. Variables in a state diagram with default values evaluate to the variable default in each state where the variable value is not explicitly set."

Conventions of 21.5 are used without exceptions.

*SuggestedRemedy*

Remove these sentences.
Also, do the same at these locations:

page: 133 line: 25
page: 134 line: 4
page: 136 line: 14

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1.2** *P* **109** *L* **39** # 2400

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The 'variable' DelayBound is never assigned a value in the state diagram and has a default value of 0x010F. It would therefore appear to be a constant.

Alternatively this might be an implementation dependant value that the implementer has to set. If that is the case this needs to be explained in more detail, for example what units is the delay represented in.

*SuggestedRemedy*

If this is a constant, move to subclause 76.2.2.1.1, remove the exception to subclause 21.5.2 found in 76.2.2.1 as this was the only variable with a default.

If this is a value that has to be set by the implementer state this, describe the calculation in detail , and provide the units this value is being measured in.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

This variable is used only by the ONU; it is assigned a value after ONU receives the syncTime parameter during the registration process.

Change: "The value includes maximum laserOnTime" to "The value includes laserOnTime"

Change "preceed" to "precede"

Remove "Default: 0x010F"

---

*Cl* **76** *SC* **76.2.2.1.4** *P* **110** *L* **24** # 181547

Lynskey, Eric Teknovus

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

Typo in definition for DelCount.

*SuggestedRemedy*

Replace "than" with "that".

*Response* *Response Status* **C**

ACCEPT.
== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

Resubmit

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*Cl* **76** *SC* **76.2.2.1.5** *P* **110** *L* **36** # 2118

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The first two sentences of this subclause are redundant to the requirements of 76.2.2.1. It's a good reminder of which state machine is used by the OLT and ONU, but it is not necessary to restate the requirement here.

*SuggestedRemedy*

Remove the word "shall" from both sentences and replace "implement" with "implements" in both sentences.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
On line 48 pg 108
Change:
"The Alignment and Idle Detection function shall be implemented in the PCS as depicted in Figure 76-11 for ONUs and as in Figure 76-10 for OLTs, including compliance with the associated state variables as specific in Subclause 76.2.2.1.1. Should there be a discrepancy between a state diagram and descriptive text, the state diagram prevails. The notation used in the state diagrams in this clause follows the conventions in @@Subclause 21.5@@. State diagram variables follow the conventions of @@Subclause 21.5.2@@ except when the variable has a default value. Variables in a state diagram with default values evaluate to the variable default in each state where the variable value is not explicitly set."
To:
"The Alignment and Idle Deletion function is implemented in the PCS as depicted in Figure 76-11 for ONUs and as depicted in Figure 76-10 for OLTs."

Update PICS to point to 76.2.2.1.5 rather than 76.2.2.1

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*Cl* **76** *SC* **76.2.2.1.5** *P* **110** *L* **37** # 1621

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *O BE PROCESSED], reword*

This says "The OLT PCS Idle deletion function shall implement the state machine as shown in Figure 76-10. The ONU PCS Idle deletion function shall implement the state machine as shown in Figure 76-11. Should there be a discrepancy between a state machines and descriptive text, the state machines prevail.." To be consistent with the terminology used in 802.3 the occurrences of "state machine" should be "state diagram". Also, there are two dots at the end.

*SuggestedRemedy*

change to "The OLT PCS Idle deletion function shall implement the state diagram as shown in Figure 76-10. The ONU PCS Idle deletion function shall implement the state diagram as shown in Figure 76-11. Should there be a discrepancy between a state diagrams and descriptive text, the state diagrams prevail."

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.2.1.5** *P* **110** *L* **39** # 2091

Kramer, Glen Teknovus, Inc.

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

extra period at the end of the paragraph

*SuggestedRemedy*

see comment

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1.5** *P* **110** *L* **39** # 2314

Hajduczenia, Marek Nokia Siemens Networ

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

"the state machines prevail.." - double dot at the end of the sentence. Remove one.

*SuggestedRemedy*

Remove one of the dots at the end of this sentence "the state machines prevail.."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1.5** *P* **110** *L* **39** # 2014

Frazier, Howard Broadcom

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

extra full stop at the end of the sentence.

*SuggestedRemedy*

delete a full stop.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1.5** *P* **111** *L* **1** # 2331

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Figure 76-10 (page 111) and Figure 76-11 (page 112) are affected. Variable DelCount is used in the state diagram and it is never initialized. Other counters are initialized in the INIT state on both figures. See also 3av_0809_hajduczenia_8.pdf relative to its impact on MPCP timestamp jitter.

*SuggestedRemedy*

Add "DelCount <= 0" to state INIT in Figure 76-10 and Figure 76-11.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.1.5** *P* **111** *L* **1** # 2341

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Figure 76-11 and Figure 76-12 are broken for certain cases:
(1) when FEC word begins at bit 1 of preamble, and
(2) frame is of size < FEC_DSize
See 3av_0809_hajduczenia_8.pdf for details

*SuggestedRemedy*

State machines need revision taking into consideration conclusions from 3av_0809_hajduczenia_8.pdf. No ready state machines are submitted as part of this comment.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

See resolution of comment #2414

*Cl* **76** *SC* **76.2.2.1.5** *P* **111** *L* **15** # 2414

Mandin, Jeff PMC Sierra

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

The transmit path IDLE deletion processes assume that there will be a full 72bit vector consisting of 8 IDLEs in the "undeletable" IPG.

This is not the case eg. consider the case where the Deficit IDLE Count algorithm reduced the IPG to 10 so that it appears thus: DTIIIIII IIIISDDD.

In any event the check is not needed, as IDLE deletion must ensure that precisely the correct number of IDLEs is deleted during each interpacket period.

*SuggestedRemedy*

1. Figure 76-10 (pg 111 line 16)

Modify the exit condition that reads:

"T_TYPE(tx_raw) = (C+E) *
IdleCount >= MinIpg *
DelCount > 0"

to

"T_TYPE(tx_raw) = (C+E) *
DelCount > 0"

2. Figure 76-11 (pg 112 line 26)

Modify the exit condition that reads:

"T_TYPE(tx_raw) = (C+E) *
IdleCount >= MinIpg *
DelCount > 0"

to

"T_TYPE(tx_raw) = (C+E) *
DelCount > 0"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

In addition to suggested remedy:

In Figure 76-11 replace the code in "Classify vector Type" with the code shown in 3av_0809_kramer_5.pdf

Glen Kramer is chartered to verify this mechanism via simulation. Report results back to TF in November.

*Cl* **76** *SC* **76.2.2.1.5** *P* **111** *L* **16** # 181551

Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A** *SSED], resubmit, ELSE, joint*

Some state diagrams throughout the draft use "else" as an exit condition and some use "ELSE". We should be consistent. Clause 77 uses "else", so perhaps that is the way to go. If we choose "else", figures affected would be 76-19, 76-26, 76-27. If we choose "ELSE", figures affected would be 76-10, 76-11, and 76-18.

*SuggestedRemedy*

Select one method and be consistent throughout clause.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Replace "else" with "ELSE" in all figures.

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

Replace "ELSE" with "else" in all figures.

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*Cl* **76** *SC* **76.2.2.1.5** *P* **112** *L* **16** # 2399

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The use of the 'if(test)' and the 'else' construct isn't supported by subclause 21.5 which subclause 76.2.2.1 states this state diagram follows.

Subclause 21.5 doesn't define 'if' construct. Subclause 1.2, which is referenced by 21.5. does define an 'if' construct in Figure 1-2 but it is of the form [action] (condition), as an example:

[reset PLS functions] (if no_collision)

The 'ELSE' defined in Table 21-1 is for use on a transition out of a state diagram (see 21.5.3, item e) - 'A branch taken when other exit conditions are not satisfied: ELSE'.

*SuggestedRemedy*

Either:

[1] Reconstruct the state diagram to follow subclause 21.5

or

[2] Locally define the constructs 'if', 'else' used here, as is already done for the exception for default values for variables. If this is done I would prefer that they were uppercase and that a 'then' construct also be locally defined.

or

[3] Preferably add an 'IF', 'THEN', 'ELSE' construct to 21.5 that can be used within state boxes.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Option 4:
"Else" construct removed from the referenced state diagram.

*Cl* **76** *SC* **76.2.2.3** *P* **130** *L* **46** # 1625

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *˙O BE PROCESSED], reword*

This says "Note that the rate of 66-bit transfers is lower then normal here."
1) "then" should be "than"
2) what is normal?

*SuggestedRemedy*

change to "Note that the rate of 66-bit transfers here is reduced due to the removal of the FEC parity blocks."

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.2.4** *P* **113** *L* **7** # 1943

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Hiding the light under a bushel

*SuggestedRemedy*

Refer to 76A

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add to end of subclause:
"Annex 76A gives an example of RS(255,223) FEC Frame Encoding."

*Cl* **76** *SC* **76.2.2.4** *P* **113** *L* **8** # 2194

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

If the OTN long-haul optical transmission network is any indication, proprietary FEC extensions may arise. What provision, if any, is available for organizational specific extension or alternative FEC instantiations? What should be avoided in particular? Mention should be made of whether such extension is possible and supported by the standard, and if so, how it would be indicated.

*SuggestedRemedy*

Extend this section to include a explanation of whether proprietary coding alternatives are supported in any manner, or disallowed. If allowed, how are such extensions to be indicated and what types of implementation would be very problematic (e.g. 'do's and don'ts)

*Response* *Response Status* **C**

REJECT.
The standard is designed to define a single PON standard for world wide use in the access network. Propriatary extensions to the fundimental characteristics of the standard should be discouraged.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **12** # 1945

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

"Galois Field"?

*SuggestedRemedy*

Explain, give reference, or tell your story without mention of it.

*Response* *Response Status* **C**

REJECT.

See resolution of comment 1944

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **12** # 1946

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

"non-binary"? Does this mean anything, here?

*SuggestedRemedy*

Delete?

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **12** # 1944

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Please give a reference for a more complete discussion of RS(255, 223). Is G.975 relevant?

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

REJECT.
There is no known Standard defining this FEC yet. There are numerous reference publications which address the subject. This FEC method is well understood in the industry and multiple TF experts have verified its specification.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **13** # 2092

Kramer, Glen Teknovus, Inc.

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

grammar

*SuggestedRemedy*

replace the hyphen with a comma in
"The code is systematic - meaning..."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **17** # 2376

Law, David 3Com

*Comment Type* **ER** *Comment Status* **R** *ROCESSED], FEC_Formula*

Please follow subclause 17.3 'Presentation of equations' found in the IEEE-SA Style Manual [http://standards.ieee.org/guides/style/section6.html#915 ].

*SuggestedRemedy*

Need to define the following by adding to the 'where:' list:

G(x) and x

Similarly, the equations on lines 21, 27 and 29 should add a 'where:' list and need to define all variables, functions and vectors - for example on line 21 L(x) is used but not defined.

*Response* *Response Status* **U**

REJECT.

This formula does not represent an equation used for calculation but rather it is a illustration of a mathematical model use to generate parity data. This representation is very similar to the ones used in Clause 74.7.4.4, Clause 65.2.3.1 and C3.2.9.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **17** # 1948

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *ROCESSED], FEC_Formula*

Explain what x is - or avoid this kind of language

*SuggestedRemedy*

Per comment

*Response* *Response Status* **U**

REJECT.
See resolution to comment #2376.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **17** # 1947
Dawe, Piers Avago

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

If you need to use a capital pi

*SuggestedRemedy*

Add it to the table of symbols, return updated table to WG chair and vice-chair

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **21** # 1950
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *ROCESSED], FEC_Formula*

"alpha is equal to 0x02 and is a root of the binary primitive polynomial x^8+x^4+x^3+x^2+1"

*SuggestedRemedy*

What does this mean? I believe "0x02" is just 2, in fancy clothes. What does " 2 is a root of the binary primitive polynomial x^8+x^4+x^3+x^2+1" mean?

*Response* *Response Status* **C**

REJECT.
This mean it is an 8 bit field with a value of 2.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **21** # 1949
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *ROCESSED], FEC_Formula*

"alpha is equal to 0x02 and is a root of the binary primitive polynomial x^8+x^4+x^3+x^2+1"

*SuggestedRemedy*

Just the same as RS(255,239) in 65.2.3.1? Are you sure?

*Response* *Response Status* **C**

REJECT.
Yes.
No change to the draft is required.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **23** # 1952
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *ROCESSED], FEC_Formula*

If this equation is any more than window dressing, give it an equation number

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

REJECT.
See resolution to comment #2376.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **23** # 1951
Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *ROCESSED], FEC_Formula*

Explain what L is

*SuggestedRemedy*

Per comment

*Response* *Response Status* **U**

REJECT.
See resolution to comment #2376.

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **32** # 1954
Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *E PROCESSED], FEC ability*

Unless you know that errors are independent (possibly a tolerable approximation for PON, certainly not true for a heavily equalised copper link), it's very useful to have some ability to detect some uncorrected errors, for good mean time to false packet acceptance in all circumstances. I believe RS codes are good for this.

*SuggestedRemedy*

Add normative text (possibly at 76.2.3.3) for error detection ability of a compliant implementation, greater than error detection capability, add PICS

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 1953

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **32** # 1953

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *E PROCESSED], FEC ability*

"The code has a correction capability of up to sixteen symbols." In a block, presumably. Are you expecting that a compliant implementation shall have that capability?

*SuggestedRemedy*

Add normative text (possibly at 76.2.3.3) for correction ability of a compliant implementation (could be less that 16), add PICS

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add to 76.2.3.3 at end of 1st para:
"Implementations shall be capable of correcting up to 16 symbols in a codeword and detect uncorrectable codewords."

Update PICs accordingly

---

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **34** # 1955

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], joint*

"Note -": it's not clear if this is normative text, or an informative NOTE

*SuggestedRemedy*

Make it normative: we need all possible help to make bit-ordering clear!

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to 76
Delete "Note -" and "Subclause"

---

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **35** # 1956

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

"d0 is identified as the LSB and d7 is identified as the MSB"

*SuggestedRemedy*

State whether this applies to a parity octet also

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to:
". d0 is identified as the LSB and d7 is identified as the MSB for all octets in accordance ..."

---

*Cl* **76** *SC* **76.2.2.4.1** *P* **113** *L* **35** # 1957

Dawe, Piers Avago

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

"MSB bit": repetition

*SuggestedRemedy*

MSB

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.4.1** *P* **114** *L* **7** # 2315

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Figure 76-12 is affected. Strange characters in Figure "Pad 'Äú" around line 7

*SuggestedRemedy*

Replace the corrupted text in Figure 76-12 with "Pad" or anything else that is deemed necessary.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.4.1** *P* **114** *L* **7** # 1997

Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Garbage characters describe padding in Figures 76-12, 76-13, and 76-20.

*SuggestedRemedy*

Correct the figures.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.4.1** *P* **114** *L* **7** # 1757

Hirth, Ryan Teknovus

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

funny character in diagram after "Pad"

*SuggestedRemedy*

fix text in diagram

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.4.1** *P* **114** *L* **7** # 1958

Dawe, Piers Avago

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

Strange characters after "Pad ,"

*SuggestedRemedy*

If you have found a way to import a drawing into Frame, please tell me! Fix the odd characters, 3 or 4 occurrences

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.4.1** *P* **114** *L* **7** # 1622

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED], typo*

Figure 76-12 contains the text "Pad, Au" which does not seem correct

*SuggestedRemedy*

should this be "Pad, 0"?

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.2.4.2** *P* **114** *L* **40** # 2316

Hajduczenia, Marek Nokia Siemens Networ

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

"padding bits to the 27 65-bit blocks" seems confusing when two numbers go after each other. Change to "padding bits to the 27 (twenty-seven) 65-bit blocks"

*SuggestedRemedy*

Change "padding bits to the 27 65-bit blocks" to "padding bits to the 27 (twenty-seven) 65-bit blocks"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
padding bits to the twenty-seven 65-bit blocks

*Cl* **76** *SC* **76.2.2.4.2** *P* **114** *L* **41** # 1959

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

"This data is then FEC-encoded, resulting in the 32-byte parity portion of the FEC codeword." Apart from some waffly jargon in 76.2.2.4.1, there is no information given for how to create the parity. This standard is supposed to be unambiguous, and in English (or state machine notation). It's not a patent; it needs to be intelligible to customers and testers, not just those very "skilled in the art".

*SuggestedRemedy*

Add a section with a blow-by-blow recipe for creating the parity portion.

*Response* *Response Status* **U**

REJECT.
Parity value is unambigously defined in c76.2.2.4.1 FEC Algorithm (RS(255, 223)). Format of the parity field is illustrated in c76A.

*Cl* **76** *SC* **76.2.2.4.2** *P* **115** *L* **27** # 1623

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED], typo*

Figure 76-13 contains the text "29 ,Au padding" which does not seem correct

*SuggestedRemedy*

should this be "29 "0" padding"?

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.2.4.2** *P* **115** *L* **27** # 2096

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Corrupted text in Figure 76-13 in box "padding"
Same in Figure 76-20.

*SuggestedRemedy*

restore to the original text

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.4.3** *P* **116** *L* **1** # 1961

Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Formating

*SuggestedRemedy*

Formatting

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.4.3** *P* **116** *L* **5** # 1960

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

You say "The FEC encoder prepends a 2 bit sync header to each group of 64 parity bits to construct a properly formed 66-bit codeword"

*SuggestedRemedy*

But you don't say in which order the bits and bytes are transmitted. Add that information, relating it to blocks 1 to 4 in Fig 76-13.

*Response* *Response Status* **U**

REJECT.
The PCS to PMA interface is a parallel interface and as such there is not "first" and "last" bit.

---

*Cl* **76** *SC* **76.2.2.4.3** *P* **116** *L* **8** # 2317

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

"appended following the 27 66-bit data blocks and transmitted to the PMA." seems confusing when two numbers go after each other. Change to "appended following the 27 (twenty-seven) 66-bit data blocks and transmitted to the PMA."

*SuggestedRemedy*

Change "appended following the 27 66-bit data blocks and transmitted to the PMA." to "appended following the 27 (twenty-seven) 66-bit data blocks and transmitted to the PMA."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"the twenty-seven 66-bit " if in compliance with IEEE Style Manual.

---

*Cl* **76** *SC* **76.2.2.5** *P* **116** *L* **12** # 2195

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Figure 76-15. Minimum and maximum burst lengths were not immediately apparent. This figure seems like a good place to indicate both minimum and maximum (if defined) burst durations.

*SuggestedRemedy*

Indicate minimum / maximum burst durations on the figure, or in related text in this section

*Response* *Response Status* **C**

REJECT.
The minimum and maximum burst length are determined by the MPCP protocol (c77) not the PHY.

---

*Cl* **76** *SC* **76.2.2.5** *P* **117** *L* **24** # 2157

Remein, Duane Alcatel-Lucent

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], 0x55*

Sync Pattern not 0x55 in Figure 76-15 and following paragraph

*SuggestedRemedy*

Remove "(0x55)" from Sync Pattern in Figure 76-15.
Line 42 Change "The ONU burst transmission begins with a synchronization pattern 0x55 (transmission bit sequence 1010 ...)"
to "The ONU burst transmission begins with a Synchronization Pattern (see Subclause 76.2.2.5.1)"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Remove "(0x55)" from Sync Pattern in Figure 76-15.
Line 42 Change "The ONU burst transmission begins with a synchronization pattern 0x55 (transmission bit sequence 1010 ...)"
to "The ONU burst transmission begins with a Synchronization Pattern (see 76.2.2.5.1)"

---

*Cl* **76** *SC* **76.2.2.5** *P* **117** *L* **24** # 2124

Lynskey, Eric Teknovus

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

Figure 76-15 does not show the end of burst delimiter.

*SuggestedRemedy*

Add end of burst delimiter to figure.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.5** *P* **117** *L* **28** # 2318

Hajduczenia, Marek Nokia Siemens Networ

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

Figure 76-15 is affected. One of the captions on the figure says "First codeword starts with 2 66-bit blocks containing IDLE". It seems confusing when two numbers go after each other. Change the text to "First codeword starts with two 66-bit blocks containing IDLE"

*SuggestedRemedy*

Change "First codeword starts with 2 66-bit blocks containing IDLE" to "First codeword starts with two 66-bit blocks containing IDLE"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.5** *P* **117** *L* **42** # 2093

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *0x55*

Synch pattern is not 0x55 anymore

*SuggestedRemedy*

1) remove text "0x55 (transmission bit sequence 1010...)"
2) remove "(0x55...)" in Figure 76-15

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2157

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **1** # 2198

Hirano, Kengo NEC Corporation

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

The ONU burst transmission ends with a burst terminator pattern of 3 blocks of all zeroes (see Figure 76-16).

*SuggestedRemedy*

SuggestedRemedy:

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2320

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **1** # 1671

Feng, Dongning Huawei Technologies

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

The end of burst delimiter pattern has been changed from all zeroes at the last meeting.

*SuggestedRemedy*

Change "The ONU burst transmission ends with a burst terminator pattern of 3 blocks of all zeroes"
To
"The ONU burst transmission ends with a burst terminator pattern of 3 blocks of END_BURST_DELIMITER."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2320

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **1** # 2320

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED], EOB*

"The ONU burst transmission ends with a burst terminator pattern of 3 blocks of all zeroes" - it is not true any more since the ONU at the end of a burst transmits Burst Terminator as decided at the last meeting. Change the text to "The ONU burst transmission ends with a END_BURST_DELIMITER pattern of length TERMINATOR_LENGTH".

*SuggestedRemedy*

Change "The ONU burst transmission ends with a burst terminator pattern of 3 blocks of all zeroes" to "The ONU burst transmission ends with a END_BURST_DELIMITER pattern of length TERMINATOR_LENGTH"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **12** # 2153

Lynskey, Eric Teknovus

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

In Figure 76-16, the term "Burst Terminator" is not defined. It should try to match the actual names used by the state diagrams.

*SuggestedRemedy*

Replace with End of Burst Delimiter.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Changed from "E" to "T"
use "END_BURST_DELIMITER"
See resolution to comment 2320

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **2** # 2319

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Why is Figure 76-16 in the middle of accompanying text? Please move it to the top of the page or under the block of text, whichever is deemed better.

*SuggestedRemedy*

Please move Figure 76-16 to the top of the page or under the block of text, whichever is deemed better.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **21** # 1727

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Figure 76-11). Otherwise, the burst may occasionally be required to transmit and extra 4 bytes of data,

*SuggestedRemedy*

Correction: Figure 76-14). Otherwise, the burst may occasionally be required to transmit extra 4 bytes of data,

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to:
"Figure 76-11). Otherwise, the burst may occasionally be required to transmit an extra 4 bytes of data"

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **24** # 1965

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Missing subclause headers?

*SuggestedRemedy*

I think there should be another subclause title here, State variables, and Constants, Variables and so on should be subordinate to it.

*Response* *Response Status* **C**

REJECT.
These subclauses were removed from previous drafts.

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **24** # 1963

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Missing subclause headers?

*SuggestedRemedy*

I think there should be two subclause titles here, 76.2.2.6 Detailed functions and state diagrams and 76.2.2.6.1 State diagram conventions

*Response* *Response Status* **C**

REJECT.
These subclauses were removed from previous drafts.

---

*Cl* **76** *SC* **76.2.2.5** *P* **118** *L* **25** # 1964

Dawe, Piers Avago

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

Subclause

*SuggestedRemedy*

subclause

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.5.1** *P* **118** *L* **31** # 2409

Mandin, Jeff PMC Sierra

*Comment Type* **T** *Comment Status* **R** *PROCESSED], ProvSyncPat*

As has been discussed in the past, it's desirable that the "synchronization pattern" be made configurable so that a pattern suitable to the particular OLT implementation may be used.

*SuggestedRemedy*

Add a new field "Sync Pattern" to the REGISTER MPCPDU and modify the definition of the current Sync Pattern to indicate that is the default Sync Pattern.

Detailed changes are illustrated in 3av_0908_mandin_1.pdf.

*Response* *Response Status* **C**

REJECT.

--- 19.08.2008 ---
Before lunch

Straw Poll:
I prefer that:
1) SP and BURST_DELIMITER be provisionable
2) neither SP nor BURST_DELIMITER be provisionable
3) Define some small positive number of "classes" for SP/BURST_DELIMITER combinations

"Chicago Rules"
1) 10
2) 16
3) 14

--- 19.08.2008 [1] ---
after lunch

Proposed response:
Allow for 2 pairs of SP/BURST_DELIMITER to be added to D2.1, along with the mechanism to communicate those to the ONU via GATE MPCPDU. The SP/BURST_DELIMITER pairs will be:
D2.0 SP / D2.0 BURST_DELIMITER
D1.8023 SP / D1.8023 BURST_DELIMITER
If accepted, the actual changes will be presented before the comment is closed.

Yes: 5
No: 14
Abstain: 7

[Failed]

--- 19.08.2008 [2] ---
after lunch

Reject the comment
Yes: 9
No: 1
Abstain: 16

[Comment is rejected]

*Cl* **76** *SC* **76.2.2.5.1** *P* **118** *L* **33** # 2156

Remein, Duane Alcatel-Lucent

*Comment Type* **T** *Comment Status* **R** *PROCESSED], ProvSyncPat*

BURST_DELIMITER and SP are currently defined as a constants. The value of these constants is optomized for the currently expected implementaions and topologies of the burst mode receiver which is not a mature technology. It would be good to define these as variables rather than a constants with a default value as defined on line 36/37 and 53/54.

*SuggestedRemedy*

Redefine as variables (Move definition to sub clause 76.2.2.5.2 and reword as variables)
Update Discovery processing (c77.3.3) to include connunication of these variables to ONU in Discovery Gate.
Add new registers to c45

see presentation 3av_0809_remein_1.pdf (frame file is available).

*Response* *Response Status* **C**

REJECT.
See comment #2409.

*Cl* **76** *SC* **76.2.2.5.1** *P* **118** *L* **37** # 2125

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

If it is shown in hex, the upper two bits of the burst delimiter should be the hex representation of a 2-bit value.

*SuggestedRemedy*

Change from 8 to 2. Similarly for the end of burst delimiter, change from 4 to 1.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Under BURST_DELIMITER
Change "0x 8 6B F8 D8 12 D8 58 E4 AB"
to "binary 01 followed by 0x 6B F8 D8 12 D8 58 E4 AB"

Under END_BURST_DELIMITER
Change "0x 4 55 55 55 55 55 55 55 55"
to "binary 10 followed by 0x 55 55 55 55 55 55 55 55"

Under SP
Change "0x 4 BF 40 18 E5 C5 49 BB 59"
to "Binary 10 0x BF 40 18 E5 C5 49 BB 59"

*Cl* **76** *SC* **76.2.2.5.1** *P* **118** *L* **39** # 1672

Feng, Dongning Huawei Technologies

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], EOB*

The definition of constant END_BURST_DELIMITER should include the transmission bit sequence.

*SuggestedRemedy*

END_BURST_DELIMITER
TYPE: 66-bit unsigned
A 66-bit value used to identify the end of the upstream burst transmissino
Value: 0x 4 55 55 55 55 55 55 55 55(transmission bit sequence: 10 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010)

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add after hex string:
"(transmission bit sequence of 10 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010 1010)"

see comment number 2125

*Cl* **76** *SC* **76.2.2.5.1** *P* **118** *L* **41** # 2152

Lynskey, Eric Teknovus

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

Typo.

*SuggestedRemedy*

Replace "transmissino" with "transmission."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.5.1** *P* **118** *L* **42** # 2123

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], EOB*

There is a discrepancy between the text on line one of this page and the definition of END_BURST_DELIMITER.

*SuggestedRemedy*

Change END_BURST_DELIMITER to have value of 0x0.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Line 1 is incorrect.
See resolution to comment 2320

*Cl* **76** *SC* **76.2.2.5.1** *P* **119** *L* **4** # 2321

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

In definition of TERMINATOR_LENGTH, there is reference to end of burst terminator containing only zeros. It is not true any more.

*SuggestedRemedy*

Change "Number of blocks containing zeroes that are transmitted at the end of each burst." to "Number of END_BURST_TERMINATOR blocks transmitted at the end of each burst."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to "Number of END_BURST_DELIMITER blocks transmitted at the end of each burst."

*Cl* **76** *SC* **76.2.2.5.2** *P* **119** *L* **13** # 2094

Kramer, Glen Teknovus, Inc.

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

Capitalization

*SuggestedRemedy*

Capitalize D in detector

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.5.2** *P* **119** *L* **35** # 2095

Kramer, Glen Teknovus, Inc.

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

Variable Transmitting is not ONU-specific. Change its description as shown in the remedy

*SuggestedRemedy*

Use
"Boolean variable indicating whether the device is transmitting or not. At the ONU, the default value of Transmitting is false. At the OLT, this variable is always set to true."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.2.5.3** *P* **120** *L* **1** # 1962

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

This standard is supposed to be written in English, or state machine notation, or, only when desperate, specified programming languages with references so that the reader can find what the syntax actually means (Pascal and Matlab have been used), and that code should if possible be executable by a machine. You can't just insert snippets of unattributed pseudo-code in I don't know what syntax.

*SuggestedRemedy*

If this pseudo-code fragment says anything that the preceding sentence doesn't, replace it with another sentence, in English. If it doesn't, delete it. Similarly in 76.2.3.1.3, 76.2.3.3.3

*Response* *Response Status* **U**

ACCEPT IN PRINCIPLE.
Insert at end of 76.1.6.1.4
"Code examples given in c76 adhere to the style of the "C" programming language."
Move 76.1.6.1.4 to new subclause 76.2.1.3

*Cl* **76** *SC* **76.2.2.6** *P* **123** *L* **12** # 2298

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

In Figure 76-18, in exit conditions from state TRANSMIT_BURST_PREAMBLE, Laser On Time should be added to the right side of conditional expressions. Otherwise, the state machine burst will be shorter by Laser On Time and OLT may not synchronize properly.

*SuggestedRemedy*

In Figure 76-18:
(1) change "CLK * SyncBlockConut < SyncLengh" to "CLK * SyncBlockConut < (SyncLengh + Laser On time) "
(2) change "CLK * SyncBlockConut = SyncLengh" to "CLK * SyncBlockConut = (SyncLengh + Laser On time)"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Pg 119 change SyncLength definition to read "Required number of sync blocks per burst. The value of this variable is derived from the syncTime and laserOnTime parameters, defined in 77.3.3.2."

*Cl* **76** *SC* **76.2.25** *P* **117** *L* **24** # 1673

Tajima, Akio NEC Corporation

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], 0x55*

In Figure 76-15 and Line 42, Sync Pattern 0x55 is incorrect.

*SuggestedRemedy*

Change Sync Pattern from "0x55" to "0x 4 BF 40 18 E5 C5 49 BB 59".

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Changed from "E" to ""T
Remove specific reference to value.
See resolution to comment 2157

*Cl* **76** *SC* **76.2.3** *P* **124** *L* **6** # 2322

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

"For both 10GBASE-PR and 10/1GBASE-PRX, the OLT PCS always operates in a burst mode." - this sentence is misleading. It may seem OLT operates in burst mode in DS direction as well.

*SuggestedRemedy*

Change
"For both 10GBASE-PR and 10/1GBASE-PRX, the OLT PCS always operates in a burst mode."
to
"For both 10GBASE-PR and 10/1GBASE-PRX, the OLT PCS always operates in a burst mode in receive direction."

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

Change to
"For both 10GBASE-PR and 10/1GBASE-PRX, the OLT PCS always operates in a burst mode in upstream direction."

*Cl* **76** *SC* **76.2.3.1** *P* **124** *L* **15** # 2130

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

There is no PICS for this shall statement. A PICS should be added or the shall should be removed.

*SuggestedRemedy*

Replace start of sentence with "The OLT synchronizer forms a bit stream...".

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.3.1.3** *P* **125** *L* **41** # 181549

Lynskey, Eric Teknovus

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

Confusing notation here. We should use the special symbols and operators found on page 10.

*SuggestedRemedy*

Replace "<>" with "not equal to" symbol.

*Response* *Response Status* **C**

ACCEPT.
Ctrl-q 9 Symbol

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

Ctrl-q 9 Symbol

==========

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*Cl* **76** *SC* **76.2.3.1.3** *P* **125** *L* **50** # 2412

Mandin, Jeff PMC Sierra

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

There are several somewhat related issues relating to synchronization in the receive path:

* 76.2.3.1.3 uses a function called "BlockFromGearbox()" but the gearbox element operates in the transmit direction only.

* Also in 76.2.3.1.3: function "appendFromInbuffer()" checks whether a 66B block is data or parity by checking whether "rx_coded<0> <> rx_coded<1>". But with this method a bit error can easily make data appear to be parity or vice versa.

* In 802.3, statements in state diagrams are regarded as executing instantaneously. So when the text in 76.2.3.3.3 states:

"BlockToDescrambler

Function that sends the next rx_coded_corrected<0..65> block to the scrambler. It does not return until the transfer is completed."

...the statement that "It does not return until the transfer is completed" needs to be clarified or deleted.

*SuggestedRemedy*

These issues were noted as part of the IDLE insertion discussion and need to be resolved accordingly.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Implement per 3av_0809_effenberger_1.pdf.

*Cl* **76** *SC* **76.2.3.1.4** *P* **127** *L* **1** # 2410

Mandin, Jeff PMC Sierra

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Likelihood of false detection of end-of-burst is remote.

However it can be made even more remote by checking for it only in the beginning of a FEC codeword

*SuggestedRemedy*

Revised the Rx synchronization state diagram to check for EOB only at the beginning of a FEC codeword.

This change can be applied to a revised synchronation state diagram that has been fixed to not use BlockFromGearbox().

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

*Cl* **76** *SC* **76.2.3.1.4** *P* **127** *L* **3** # 2109

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

There is no PICS for this shall statement. A PICS should be added or the shall should be removed. A PICS item should be added as item SM5 in 76.4.4.7.

*SuggestedRemedy*

SM5,
OLT synchronizer,
76.2.3.1.4,
Meets the requirements of Figure 76-19,
OLT:FEC:M,
Yes[] No[]

*Response* *Response Status* **C**

ACCEPT.
Changed from "E" to "T"
See resolution to comment #2110

*Cl* **76** *SC* **76.2.3.2** *P* **127** *L* **49** # 2131

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

If the previous comment for the OLT synchronizer is accepted, then the same should be done for the ONU.

*SuggestedRemedy*

Replace start of sentence with "The OLT synchronizer forms a bit stream...". Remove PICS item SM3.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
The ONU synchronizer forms a bit stream."

Remove PICS item SM3

*Cl* **76** *SC* **76.2.3.2** *P* **128** *L* **27** # 1624

Anslow, Peter Nortel Networks

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

Figure 76-20 contains the text "29 ,Au padding" which does not seem correct

*SuggestedRemedy*

should this be "29 "0" padding"?

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.3.2** *P* **128** *L* **27** # 2323

Hajduczenia, Marek Nokia Siemens Networ

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

Figure 76-20 is affected. Strange characters in Figure "Pad 'Äú" around line 27 and 34

*SuggestedRemedy*

Replace the corrupted text in Figure 76-20 with "Padding" or anything else that is deemed necessary (both occurences).

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.2** *P* **128** *L* **33** # 2154
Lynskey, Eric Teknovus

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

Text in the first block of the FEC frame line has been corrupted.

*SuggestedRemedy*

Replace ",Au" with "0".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.2.3** *P* **130** *L* **6** # 2324
Hajduczenia, Marek Nokia Siemens Networ

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

Space missing between Type and variable type for FEC_cnt variable.

*SuggestedRemedy*

Replace "Type:8 bit unsigned" with "Type: 8 bit unsigned"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.3** *P* **130** *L* **36** # 2401
Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

I think the frame being refereed to here is a FEC frame and not an IEEE 802.3 frame.

*SuggestedRemedy*

Change the text '.. contained in the frame based ..' to read '.. contained in the FEC frame based ..'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change the text '.. Contained in the frame based ..' to read '.. Contained in the FEC codeword based ..'.

*Cl* **76** *SC* **76.2.3.3** *P* **130** *L* **36** # 2182
Woodward, Ted Telcordia Technologie

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

Features discussed in Clause 45.2.1 related to FEC monitoring and statistics are not discussed in this section, and it seems like they should be.

*SuggestedRemedy*

Include discussion of FEC monitoring and reporting capabilities to be supported, or make reference thereto.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add proper xref in 3rd para, ex.
"If the decode_success is false, then a counter is incremented (see @@Subclause 45.2.1.88 through 45.2.1.89)."

*Cl* **76** *SC* **76.2.3.3** *P* **130** *L* **36** # 2325
Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

"The FEC decoder corrects or confirms the correctness of the 27 66-bit blocks contained" seems confusing when two numbers go after each other. Change to "The FEC decoder corrects or confirms the correctness of the 27 (twenty seven) 66-bit blocks contained"

*SuggestedRemedy*

Change "The FEC decoder corrects or confirms the correctness of the 27 66-bit blocks contained" to "The FEC decoder corrects or confirms the correctness of the 27 (twenty seven) 66-bit blocks contained"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"correctness of the twenty seven 66-bit blocks"
If in alignment with IEEE Style Manual

*Cl* **76** *SC* **76.2.3.3** *P* **130** *L* **46** # 1728
Lin, Rujian Shanghai Luster Terab

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

transfers is lower then normal here. This is corrected in the idle insertion step

*SuggestedRemedy*

Correction: transfers is lower than normal here. This will be corrected in the idle insertion step

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.3** *P* **130** *L* **50** # 1968

Dawe, Piers Avago

*Comment Type* **TR** *Comment Status* **A** *E PROCESSED], FEC ability*

As a previous comment: need normative specifications for an implementation's decoding ability, and (stronger) error detecting ability.

*SuggestedRemedy*

Add normative text for correction ability of a compliant implementation (could be less that 16), and for error detection capability, greater than error detection capability. Add PICS.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 1953

---

*Cl* **76** *SC* **76.2.3.3** *P* **131** *L* **53** # 1626

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *O BE PROCESSED], reword*

The sentence "If the variable decode_failures is set to be 1, then all sync headers for the received payload blocks of the FEC codeword to take a value of {SH.0,SH.1} = 00." does not make sense

*SuggestedRemedy*

change to "If the variable decode_failures is set to be 1, then all sync headers for the received payload blocks of the FEC codeword take a value of {SH.0,SH.1} = 00."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to c76

change to "If the variable decode_failures is set to 1, then each sync header of the received payload blocks in the FEC codeword is set to a value of binary 00."

---

*Cl* **76** *SC* **76.2.3.3** *P* **131** *L* **53** # 2097

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *SSED], [TO BE DISCUSSED]*

Unconventional notation {SH.0, SH.1}

*SuggestedRemedy*

Use SH<1:0> or sync_header<1:0>

Same is on page 143, line 45

*Response* *Response Status* **C**

ACCEPT.
Page 131 resolved in comment #1626
Remove {SH.0, SH.1} on page 143 ln 45.

---

*Cl* **76** *SC* **76.2.3.3.3** *P* **133** *L* **9** # 181550

Lynskey, Eric Teknovus

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

Pseudo-code could be made easier to read.

*SuggestedRemedy*

Start "else" branch on new line.

*Response* *Response Status* **C**

ACCEPT.
== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

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*Cl* **76** *SC* **76.2.3.3.4** *P* **133** *L* **20** # 1966

Dawe, Piers Avago

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

Have some paragraphs got lost or mis-ordered? We have The body of this Subclause..." here and on the next page.

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Remove duplicate text.

---

*Cl* **76** *SC* **76.2.3.3.4** *P* **133** *L* **20** # 1967

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

"The FEC Decoding function shall be implemented in the PCS as depicted in Figure 76-22." Figure 76-22 is titled "FEC Decoder state diagram" but it isn't; there is nothing about implementing the FEC Decoding function, only how to set/unset persist_dec_fail.

*SuggestedRemedy*

"The FEC Decoding function in the PCS shall determine persist_dec_fail as depicted in Figure 76-22." Figure 76-22 persist_dec_fail state diagram

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
The diagram describes the FEC codeword processing.

Rename figure to "FEC codeword processing state diagram"

*Cl* **76** *SC* **76.2.3.3.4** *P* **133** *L* **27** # 2111

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

PICS item SM4 has incorrect reference.

*SuggestedRemedy*

SM4,
FEC decoder,
76.2.3.3.4,
Meets the requirements of Figure 76-22,
FEC:M
Yes[] No[]

*Response* *Response Status* **C**

ACCEPT.
Changed from "E" to "T"

*Cl* **76** *SC* **76.2.3.3.4** *P* **133** *L* **30** # 2098

Kramer, Glen Teknovus, Inc.

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

State diagram in Figure 76-22 is missing transition "BEGIN"

*SuggestedRemedy*

Add this tranition into INIT state

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.4** *P* **133** *L* **51** # 2183

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

This section describes BER monitoring capability, but does not clarify that this is a measure of the uncorrected native BER, since it is measuring on the synch headers, which do not have FEC coverage. It would be helpful to the reader to explicitly note that this is a measure of uncorrected BER.

*SuggestedRemedy*

include informative sentence indicating that this feature provides measure of uncorrected native BER.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Add text at end of 2nd para (ln 54):
"This BER monitor records errors that exist prior to the FEC function."

*Cl* **76** *SC* **76.2.3.4** *P* **133** *L* **54** # 1627

Anslow, Peter Nortel Networks

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

Figures 76-23 and 76-24 seem to have been missed out. The numbering goes straight from 76-22 to 76-25

*SuggestedRemedy*

Renumber Figures 76-25 onwards.

*Response* *Response Status* **C**

ACCEPT.
Moved to c76

*Cl* **76** *SC* **76.2.3.4.4** *P* **134** *L* **51** # 1729

Lin, Rujian Shanghai Luster Terab

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

TThe BER Monitor

*SuggestedRemedy*

Correction: The BER Monitor

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.7** *P* **136** *L* **8** # 1730

Lin, Rujian Shanghai Luster Terab

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

in the same locations

*SuggestedRemedy*

Correction: at the same locations

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.7.1** *P* **136** *L* **17** # 2099

Kramer, Glen Teknovus, Inc.

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

This section is missing the definition of FIFO_II_SIZE

*SuggestedRemedy*

use the following definition

FIFO_II_SIZE
TYPE: 16-bit unsigned
This constants represents the size of Idle Insertion FIFO buffer. This buffers should be of the size sufficient to fill the gaps introduced by removing the parity blocks from a MAC frame of the maximum size.
Value: 42

(I am not sure if explanation is needed, but here it is:
Max frame = 2000 bytes
FEC codewords per frame = CEILING[(2000+IPG+PRE)/216] = 10
Gap (in 66-b blocks) per frame = 10*4 = 40.
Add 2 for extra margin = 42)

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Skip explaination.

FIFO_II_SIZE
TYPE: 16-bit unsigned
This constant represents the size of Idle Insertion FIFO buffer. This buffer should be able to accommodate the number of 66-bit blocks sufficient to fill the gap introduced by removing the parity blocks from a maximum size MAC frame.
Value: 42

*Cl* **76** *SC* **76.2.3.7.1** *P* **136** *L* **24** # 2326

Hajduczenia, Marek Nokia Siemens Networ

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

Space missing between "Subclause" and "76.2.2.1.1". Insert the space as necessary.

*SuggestedRemedy*

Change "Subclause76.2.2.1.1" to "Subclause 76.2.2.1.1"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.7.2** *P* **136** *L* **26** # 2034

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Definition of RX_CLK is missing

*SuggestedRemedy*

Add the following definition:

RX_CLK
TYPE: boolean
This variable represents the TX_CLK signal defined in Subclause 46.3.2.1

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
RX_CLK
TYPE: boolean
This variable represents the TX_CLK signal defined in 46.3.2.1

*Cl* **76** *SC* **76.2.3.7.2** *P* **136** *L* **31** # 2100

Kramer, Glen Teknovus, Inc.

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

input and output processes of Idle Insertion have been combined into one, but the description of FIFO_II has not been updated.

*SuggestedRemedy*

replace this text:
"This FIFO is internal to the Idle Insertion function and is shared by input on output processes of Idle Insertion. Upon initialization, all elements of this array are set to contain 72-bit vectors representing /I/ characters. FIFO_II is a zero-based array of size sufficient to hold maximum size frame."

with this text:

"This FIFO is internal to the Idle Insertion process. Upon initialization, all elements of this array are set to contain 72-bit vectors representing /I/ characters. FIFO_II is a zero-based array of size FIFO_II_SIZE (See 76.2.3.7.1)."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.2.3.7.2** *P* **136** *L* **53** # 2033

Kramer, Glen Teknovus, Inc.

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

1) Definition of variable VectorCount is missing
2) Variable RxVecorCount is defined, but not used in state diagram

*SuggestedRemedy*

1) Remove definition of RxVectorCount
2) Add definition of VectorCount, as shown below:

VectorCount
TYPE: 16-bit unsigned
This variable tracks the number of of 72-bit vectors stored in the FIFO_II.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.2.3.7.5** *P* **137** *L* **21** # 2133

Lynskey, Eric Teknovus

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

There is no PICS for this shall statement.

*SuggestedRemedy*

Item,
Idle insertion,
76.2.3.7.5,
Meets the requirements of Figure 76-26,
M,
Yes[] No[]

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.3** *P* **137** *L* **24** # 2382

Law, David 3Com

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

Suggest that the title of this subclause would be clearer if it simply read '10GBASE-PR and 10/1GBASE-PRX PMA' since this is in fact what is defined by this subclause and its subclauses, also the current title doesn't say what PMA this is the extensions to.

*SuggestedRemedy*

Change 'Extensions to PMA for 10GBASE-PR and 10/1GBASE-PRX' to read '10GBASE-PR and 10/1GBASE-PRX PMA'.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.3** *P* **137** *L* **28** # 2327

Hajduczenia, Marek Nokia Siemens Networ

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

Incorrect PMD name. There is no 1000BASEPX PMD. Change to "1000BASE-PX"

*SuggestedRemedy*

Change "1000BASEPX" to "1000BASE-PX"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.3** *P* **137** *L* **28** # 2383

Law, David 3Com

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

State where the 1000BASE-PX PMA specification is found, also typo.

*SuggestedRemedy*

Change the text '.. and 1000BASEPX, as shown in Table 76-5.' to read '.. and 1000BASE-PX defined is subclause 65.3.2, as shown in Table 76-5.'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
.. And 1000BASE-PX defined in Subclause @@65.3.2@@, as shown in Table 76-5.

---

*Cl* **76** *SC* **76.3** *P* **137** *L* **29** # 2035

Kramer, Glen Teknovus, Inc.

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

Typo

*SuggestedRemedy*

1000BASEPX should be 1000BASE-PX

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.3** *P* **137** *L* **29** # 1731

Lin, Rujian Shanghai Luster Terab

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

1000BASEPX

*SuggestedRemedy*

Correction: 1000BASE-PX

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.3** *P* **137** *L* **39** # 2360

Law, David 3Com

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

Suggest that 'As specified in Clause 51 with extensions defined in @@76.3.1@@ below' in the receive function column should be changed to read 'Identical to 10GBASE-PR-U. This parallels the text used in the Transmit function two lines below.

*SuggestedRemedy*

See comment.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.3** *P* **137** *L* **40** # 2300

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *table 76-5 r3*

In Table 76-5, the Line 3 of the column "PMA" should contain "10GBASE-PR-D" and not "10GBASE-PR-U"

*SuggestedRemedy*

Replace "10GBASE-PR-U" with "10GBASE-PR-D" in Table 76-5, Line 3 of column "PMA".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.3** *P* **137** *L* **40** # 2036

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *table 76-5 r3*

Wrong PMA name in table 76-5, on line 40

*SuggestedRemedy*

10GBASE-PR-U should be 10GBASE-PR-D

*Response* *Response Status* **C**

ACCEPT.
3rd row of table (not including headers)

*Cl* **76** *SC* **76.3** *P* **137** *L* **40** # 2381

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *table 76-5 r3*

The 10GBASE-PR-U PHY is already covered by the first line of Table 76-5 so I think this line should read 10GBASE-PR-D.

*SuggestedRemedy*

Change '10GBASE-PR-U' to read '10GBASE-PR-D'.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.3.1.1** *P* **137** *L* **52** # 2037

Kramer, Glen Teknovus, Inc.

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

definition on PMD_SIGNAL.request(tx_enable) is broken across two pages.

*SuggestedRemedy*

There should be a setting in Framemaker to keep lines of a paragraph together. Either use this setting, or insert blank lines to move the line "PMD_SIGNAL.request(tx_enable)" to the enxt page

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.3.1.1** *P* **138** *L* **42** # 2328

Hajduczenia, Marek Nokia Siemens Networ

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

Text "It is generated by the PCS's data detector (see 75)" seems to have incomplete reference. Which subclause is meant in here ? Probably data detector subclause in Clause 76 should be referenced (76.2.2.5) though it is not clear.

*SuggestedRemedy*

Fix the incomplete reference in this line. Probably data detector subclause in Clause 76 should be referenced (76.2.2.5) though it is not clear.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.3.2** *P* **139** *L* **11** # 2386

Law, David 3Com

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Since this PMD parameter is related to a 10GBASE-PR-D PHYs acquiring lock to the incoming signal, and therefore inside a OLT, the electrical signal after the PMD is TP8, not TP4 (see Figures 75-3).

*SuggestedRemedy*

On line 11, line 16 and line 24:

Change '.. at TP4 ..' to read '.. at TP4 for a 10/1GBASE-PRX-D PHY, or TP8 for a 10GBASE-PR-D PHY, ..',

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #2175

(1) Change line:
"CDR lock time (denoted TCDR) is defined as a time interval required by the receiver to acquire phase and frequency lock on the incoming data stream."
to read:
"CDR lock time (denoted TCDR) is defined as a time interval required by the receiver to acquire phase lock on the incoming data stream."

(2) In 76.3.2.1 and 76.3.2.1.1 change all (3 locations, line 11, line 16 and line 24) references from TP4 to TP8.

*Cl* **76** *SC* **76.3.2** *P* **139** *L* **20** # 2405

Law, David 3Com

*Comment Type* **TR** *Comment Status* **A** *ESSED] Informative Annexes*

I think this subclause and it's subclauses should be moved to an informative Annex. TCDR is not a normative value, there is no shall statement related to its value, nor can there be as it is measured in relation to TP4 (which I think should be TP8 for a 10GBASE-PR-D PHY - see other comment) which, as stated in subclause 75.3.2, the electrical specifications of the PMD service interface (TP4 or TP8) are not system compliance points.

*SuggestedRemedy*

Move this text to an informative Annex.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Implementation per 3av_0809_remein_2.pdf.

*Cl* **76** *SC* **76.3.2.1** *P* **139** *L* **16** # 2038

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED], 0x55*

synchronization pattern is not 0x55 anymore

*SuggestedRemedy*

Replace:
"appearance of a valid synchronization pattern (0x55.) at TP4."

with:

"appearance of a valid synchronization pattern (as defined in 76.2.2.5.1) at TP4."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Use suggested remedy and in addition replace TP4 with TP8.

*Cl* **76** *SC* **76.3.2.1.1** *P* **139** *L* **20** # 2363

Law, David 3Com

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

I don't think either 75-3 or 75-4 test setup, they are labeled as block diagrams and I don't see any test equipment in these figures

*SuggestedRemedy*

Correct the text 'Figure 75-3 and Figure 75-4 illustrate the tests setup ..'.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
"@@Figure 75-3@@ and @@Figure 75-4@@ illustrate the tests setup for the OLT PMA receiver (upstream) TCDR time. The test assumes that there is an optical PMD transmitter ."
to:
"The OLT PMA Receiver TCDR time test assumes that there is an optical PMD transmitter ." (CDR subscripted)

*Cl* **76** *SC* **76.3.2.1.1** *P* **139** *L* **20** # 2039

Kramer, Glen Teknovus, Inc.

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

typo

*SuggestedRemedy*

"tests" should be "test"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
And setup should be setups.

*Cl* **76** *SC* **76.3.2.1.1** *P* **139** *L* **20** # 1628

Anslow, Peter Nortel Networks

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

This says "@@Figure 75-3@@ and @@Figure 75-4@@ illustrate the tests setup for the OLT PMA receiver (upstream) TCDR time." but Figures 75-3 and 75-4 are just the block diagrams of 10GBASE-PR and 10GBASE-PRX

*SuggestedRemedy*

If these are the correct figures then change the text to: "The OLT PMA receiver (upstream) TCDR time is measured in an arrangement as shown in Figure 75-3 and Figure 75-4."

*Response* *Response Status* **C**

ACCEPT.
[Moved to C76]
[Clause and subclause number was added]

---

*Cl* **76** *SC* **76.3.2.1.1** *P* **139** *L* **33** # 2184

Woodward, Ted Telcordia Technologie

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

colon is followed by new paragraph. It's not clear if there is some content missing or this was a formatting error.

*SuggestedRemedy*

adjust formatting or content appropriately.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change para to:
"A non-rigorous way to describe this test setup would be to use an ONU transmitter PMD with a known Ton time and an OLT receiver PMD with a known Treceiver_settling time."

---

*Cl* **76** *SC* **76.4** *P* **140** *L* **1** # 2040

Kramer, Glen Teknovus, Inc.

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

No point of listing every single PMD subtype in the subclause title

*SuggestedRemedy*

Use

"76.4 Protocol implementation conformance statement (PICS) proforma for Clause 76, Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS), and Physical Media Attachment (PMA) for point-to-multipoint media, types 10GBASE-PR and 10/1GBASE-PRX"

*Response* *Response Status* **C**

ACCEPT.
Gladly

---

*Cl* **76** *SC* **76.4.2.2** *P* **141** *L* **5** # 2042

Kramer, Glen Teknovus, Inc.

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

Incorrect clause name

*SuggestedRemedy*

"point-to-point" should be "point-to-multipoint"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **76** *SC* **76.4.3** *P* **141** *L* **26** # 2113

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

There is no "FEC" option, yet this option is used in a number of PICS items, such as FE1 and FE2. The FEC option needs to be added here, or the FECEncoder and FECDecoder options need to be used throughout the PICS.

*SuggestedRemedy*

Combine FECEncoder and FECDecoder into a single PICS option, FEC.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Changed from "E" to "T"
as in suggested remedy and
change status field to "M"

---

*Cl* **76** *SC* **76.4.3** *P* **141** *L* **27** # 2041

Kramer, Glen Teknovus, Inc.

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

Inconsistent item names

*FECEncoder and *FEC-Decoder

*SuggestedRemedy*

Either use hyphen or not in both cases

*Response* *Response Status* **C**

ACCEPT.
See resolution to comment 2113

*Cl* **76** *SC* **76.4.3** *P* **141** *L* **27** # 1969

Dawe, Piers Avago

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

76.1.2.4

*SuggestedRemedy*

76.2.2.4

*Response* *Response Status* **C**

ACCEPT.
Also see comment 2113

*Cl* **76** *SC* **76.4.3** *P* **141** *L* **29** # 1970

Dawe, Piers Avago

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

76.2.3.2

*SuggestedRemedy*

76.2.3.3

*Response* *Response Status* **C**

ACCEPT.
Also see comment 2113

*Cl* **76** *SC* **76.4.4.2** *P* **142** *L* **6** # 2147

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *PROCESSED], Inherited Req*

How do we handle requirements that are inherited from a different clause and not written in this clause? Do we keep the PICS or not? Items FS1 and FS2 point to non-existent variables. These variables are defined in Clause 65 and inherited here, but are not otherwise present in the document.

*SuggestedRemedy*

Remove items FS1 and FS2.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

For PICS items FS1 and FS2 change cross to refer to subclause 65.1.3.1.

*Cl* **76** *SC* **76.4.4.3** *P* **142** *L* **20** # 2127

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *PROCESSED], Inherited Req*

How do we handle requirements that are inherited from a different clause and not written in this clause? Do we keep the PICS or not? In this case, there are requirements for items PM1, PM2, PM7, and PM8. However, if you go to the subclauses listed, you then will get bounced to another clause entirely.

*SuggestedRemedy*

If having requirements by reference is ok, then no change is needed. If not, then remove items PM1, PM2, PM7, and PM8. Or, perhaps have a single item that says all of the other requirements from Clause 65 are met.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

For PICS items PM1, PM2, change reference to point to 65.1.3.2.
For PICS items PM7, and PM8 change reference to point to 65.1.3.3.3.

*Cl* **76** *SC* **76.4.4.4** *P* **143** *L* **12** # 2108

Lynskey, Eric Teknovus

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

Reference in item DD2 is incorrect.

*SuggestedRemedy*

Replace with 76.2.2.5.4.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.4.4.4** *P* **143** *L* **14** # 2129

Lynskey, Eric Teknovus

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

There is no PICS item for the OLT data detector, and only one state diagram is mentioned for the ONU data detector.

*SuggestedRemedy*

Replace item DD3 and add item DD4:

DD3,
ONU State diagrams,
76.2.2.5.6,
Meets the requirements of Figure 76-17 and Figure 76-18b.
ONU:M,
Yes[] No[]

DD4,
OLT State diagrams,
76.2.2.5.6,
Meets the requirements of Figure 76-17 and Figure 76-18a.
OLT:M,
Yes[] No[]

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.4.4.5** *P* **143** *L* **21** # 2044

Kramer, Glen Teknovus, Inc.

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

Incorrect PICs requirement

"If the minimum IPG was transmitted after a frame, then 4 IDLE control character are deleted for every 27 vectors transmitted."

We delete 4 vectors containing idles, not 4 idles. This has been corrected in clause text, but is missed in PICS.

*SuggestedRemedy*

replace

"If the minimum IPG was transmitted after a frame, then 4 IDLE control character are deleted for every 27 vectors transmitted."

with

"If the minimum IPG was transmitted after a frame, then 4 vectors containing IDLE control character are deleted for every 27 vectors transmitted.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.4.4.5** *P* **143** *L* **22** # 2128

Lynskey, Eric Teknovus

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

There is no associated "shall" requirement for PICS item AIC1. We either need to add a requirement or should remove the PICS item. Also, it is not clear what this item is trying to describe. It is an ONU specific item, but the only ONU specific function in this block of text refers to the alignment of the start character. It seems that the behavior described by this item should be fully covered by compliance with the state machine, and therefore this item is not necessary.

*SuggestedRemedy*

Remove item AIC1.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **76** *SC* **76.4.4.5** *P* **143** *L* **27** # 2043
Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A**
Incorrect function name (in two places)

*SuggestedRemedy*
"Idle Detection" should be 'Idle Deletion"

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

*Cl* **76** *SC* **76.4.4.6** *P* **143** *L* **38** # 2134
Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *BE PROCESSED], FEC intro*
I cannot find the shall statement associated with PICS item FE1.

*SuggestedRemedy*
Add a shall or remove item FE1.

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
In 76.2.2.4 FEC Encoding
Change sentence to read
"The 10G-EPON links shall use the Reed-Solomon code (255, 223) FEC encoding."

In 76.2.3.3 FEC Decoding
Add first sentence "The 10G-EPON links shall use the Reed-Solomon code (255, 223) FEC decoding."

In PICS (pg 143)
Change FE1 feature to read "FEC Encoding choice"
Add "FE2" feature = "FEC Decoding choice" reference 76.2.3.3 (all else same as FE1)
Renumber current FE2 to FE3

*Cl* **76** *SC* **76.4.4.6** *P* **143** *L* **41** # 2112
Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A**
Subclause reference is incorrect for PICS item FE2.

*SuggestedRemedy*
Replace with 76.2.3.3.

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

*Cl* **76** *SC* **76.4.4.7** *P* **144** *L* **5** # 2045
Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *FEC PICS*
Missing clause number for item SM1

*SuggestedRemedy*
Use 76.2.2.4

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
See resolution to 2132 & 2134

*Cl* **76** *SC* **76.4.4.7** *P* **144** *L* **5** # 2132
Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *3E PROCESSED], FEC PICS*
I cannot find the shall statement associated with PICS item SM1. I did a search on all locations of Figure 76-12 and did not see anything with a "shall". A requirement should be added or the PICS item should be removed.

*SuggestedRemedy*
Remove item SM1.

*Response* *Response Status* **C**
ACCEPT IN PRINCIPLE.
Change
"Note - For the (255,223) Reed-Solomon code, the symbol size equals one octet. The d0 is identified as the LSB and d7 is identified as the MSB bit in accordance with the conventions of Subclause @@3.1.1@@. See Figure 76-12."
to read

"For the (255,223) Reed-Solomon code, the symbol size equals one octet. The d0 is identified as the LSB and d7 is identified as the MSB in accordance with the conventions of 3.1.1. Bit ordering shall be as illustrated in Figure 76-12." maintain subscripting

In PICS pg 144
Add reference to SM1 76.2.2.4.1.

*Cl* **76** *SC* **76.4.4.7** *P* **144** *L* **7** # 2110

Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Item SM2 should be reworked to reference the ONU and have the subclause updated.

*SuggestedRemedy*

SM2,
ONU synchronization,
76.2.3.2.5,
Meets the requirements of Figure 76-21,
ONU:FEC:M,
Yes[] No[]

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change SM2 a proposed in suggested remedy
Add:
SM3,
OLT synchronization,
76.2.3.1.4,
Meets the requirements of Figure 76-19,
OLT:FEC:M,
Yes[] No[]

*Cl* **76** *SC* **76.4.4.9** *P* **144** *L* **27** # 2126

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *BE PROCESSED], TQ Delay*

Item DV1 seems to be incorrect. It points to a non-existent subclause and is inconsistent with the requirement of 76.3.1.3.2.

*SuggestedRemedy*

Replace subclause with 76.3.1.3.2. Reword value/comment to refer to one time_quantum instead of 16-bit times.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Replace subclause with 76.1.3.2. Reword value/comment to refer to [TBD] time_quantum instead of 16-bit times.
(achievable delay variation is still in question).

See comment #2086 for value of [TBD]

*Cl* **76** *SC* **76.4.4.9** *P* **144** *L* **27** # 2046

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *TQ Delay*

"Combined delay variation through RS, PCS, and PMA sublayers is limited to 16 bit times"

The clause text specified this delay variability as 1 TQ. 1 time_quantum is 160 bit times, not 16, as it was in 1G EPON.

AAlso note that another comment suggested to make this time bigger.

*SuggestedRemedy*

Replace "16 bit times" with "1 time_quantum"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to 2126

*Cl* **76A** *SC* *P* **152** *L* # 2048

Kramer, Glen Teknovus, Inc.

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

Empty page at the end of Annex 76A

*SuggestedRemedy*

Remove empty page

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Moved to 76A
Frame is as frame is, will try.

*Cl* **76A** *SC* **3** *P* **145** *L* **47** # 1787

KIMURA, Mitsunobu Hitachi Communicatio

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

A word "ie." is shown. Maybe "i.e." is more correct.

*SuggestedRemedy*

Should be "i.e.".

*Response* *Response Status* **C**

ACCEPT.
See resolution to comment 2047

Cl **76A** SC **6** P **149** L **2** # 1788
KIMURA, Mitsunobu Hitachi Communicatio

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

A word "ie." is shown. Maybe "i.e." is more correct.

*SuggestedRemedy*

Should be "i.e.".

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2047

Cl **76A** SC **6** P **149** L **6** # 1789
KIMURA, Mitsunobu Hitachi Communicatio

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

In the title of Table 76A-4, two spaces are shown between "parity octets".

*SuggestedRemedy*

Should be "parity octets" (one space between the words).

*Response* *Response Status* **C**

ACCEPT.

Cl **76A** SC **7** P **150** L **2** # 1790
KIMURA, Mitsunobu Hitachi Communicatio

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

In L2 and L38, a word "ie." is shown. Maybe "i.e." is more correct.

*SuggestedRemedy*

Should be "i.e.".

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment 2047

Cl **76A** SC **76A** P **145** L **6** # 1971
Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

These tables are very necessary, long, and hard to transcribe

*SuggestedRemedy*

Please put them on the web in machine-readable format, and give the URL here

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
The machine-readable files will be posted on the IEEE website at http://standards.ieee.org/downloads/802/802.3av-2009/.

Fix the subclause numbers e.g. "76A.2 Introduction and rationale" should be "76A.1 Introduction and rationale"

DR will send files to GK.
URL will be added to section 76A in the form of a footnote to the first sentence.

Cl **76A** SC **76A.3** P **146** L **1** # 2329
Hajduczenia, Marek Nokia Siemens Networ

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

Why is this line of text separated from the remainer of the block on page 145 ? Switch the orphan control off.

*SuggestedRemedy*

Move line 1 on page 146 back to page 145.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Will beat on frame.

Cl **76A** SC **76A.3** P **146** L **6** # 2250
Ganga, Ilango Intel

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

State in the table title row that the table rows follow hexadecimal notation.

*SuggestedRemedy*

Per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Will use footnote to table.

*Cl* **76A** *SC* **76A.5** *P* **149** *L* **10** # 1972

Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

In Table 76A-4, you put "0x" in front of every hex number, for no apparent benefit.

*SuggestedRemedy*

Remove all the 0x in this table. State above in the text that they are in hex. Same for Table 76A-5.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Notation to go in footnote.

*Cl* **76A** *SC* **76A.6** *P* **149** *L* **6** # 2022

Frazier, Howard Broadcom

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*

Table 76A-4 is very hard to read.

*SuggestedRemedy*

Delete the "0x" before each entry.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comment #1972

*Cl* **76A** *SC* **76A.6** *P* **149** *L* **7** # 2148

Lynskey, Eric Teknovus

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Table 76A-4 is and Table 76A-5 are somewhat difficult to read. It would be nice if the "n = X" column could always be on one line. Also, it seems unnecessary to have "0x" in every other cell.

*SuggestedRemedy*

Adjust column width so the first colunmn fits on a single line. Remove "0x" from other cells. If necessary, add a footnote stating that the values in those cells are hex.

*Response* *Response Status* **C**

ACCEPT.
See resolution to comment #1972

*Cl* **76A** *SC* **9** *P* **150** *L* **33** # 1791

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

The Subclause referred as "76.2.3.4" should be revised.

*SuggestedRemedy*

Should be "76.2.2.4" in D2.0.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.1** *P* **153** *L* **20** # 2407

Mandin, Jeff PMC Sierra

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Clause 77 should point back to Clause 64 where possible

*SuggestedRemedy*

Replace the introductory sections of clause 77 with text that says eg. "Principles of Multipoint MAC Control is described in 64.x.x.x" .....

Do this in the following subclauses: 77.1, 77.2.1

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

[Changed from "E" to "T"]
Based on this argument, C77 should comprise mainly of references to C64 if the description is exactly the same and introduce only subsections which change. We decided to keep C77 as independent from C64 as possible. Decision on this one is up to the group.

*Cl* **77** *SC* **77.1.2** *P* **154** *L* **52** # 1998

Brown, Alan Wave7 Optics, Inc.

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

References to figures should not include period. There are multiple similar references throughout this section. Similar figure references in this document use unique numeric only figure identifiers.

*SuggestedRemedy*

Preferred remedy is to use distinct figure numbers, as in "Figure 77-2" and "Figure 77-3". Failing that, use figure references without period, as in "Figure 77-2a" and "Figure 77-2b" because that is what the figures themselves use.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.1.2** *P* **156** *L* **1** # 1814

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *oint, Figure inconsistencies v*

inconsistencies between this figure and how things are done in other diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **77** *SC* **77.1.2** *P* **157** *L* **1** # 1815

D'Ambrosia, John Force10 Networks

*Comment Type* **E** *Comment Status* **R** *oint, Figure inconsistencies v*

inconsistencies between this figure and how things are done in other diagrams elsewhere in 802.3:
1. use of lower case text
2. reference to clause #'s in diagram
3. drawing of interface between RS and PCS.

*SuggestedRemedy*

make all text caps
delete clause # references in diagrams
just have a single column connecting the two interfaces, not a box then column, then box.

*Response* *Response Status* **C**

REJECT.
Editors will update diagrams when official 802.3 guidelines are published.

*Cl* **77** *SC* **77.1.5** *P* **159** *L* **30** # 2185

Woodward, Ted Telcordia Technologie

*Comment Type* **E** *Comment Status* **R**

Seems like a typo "!(a<b or a-b)" and similarly on the following two lines.

*SuggestedRemedy*

Correct extra '!' in these 3 lines

*Response* *Response Status* **C**

REJECT.
[Subclause number was fixed]
[Page number was fixed]
Statements are logically correct.

*Cl* **77** *SC* **77.2.1** *P* **161** *L* **1** # 2049

Kramer, Glen Teknovus, Inc.

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

Two separate bullet lists have continuous numbering

*SuggestedRemedy*

Restart bullet numbering for the transmit operation

*Response* *Response Status* **C**

ACCEPT.
[Page number was fixed]

*Cl* **77** *SC* **77.2.2** *P* **163** *L* **14** # 1792

KIMURA, Mitsunobu Hitachi Communicatio

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

Between the words "ONU the", a comma is needed.

*SuggestedRemedy*

Should be "ONU, the".

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

*Cl* **77** *SC* **77.2.2** *P* **163** *L* **30** # 2137

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.request parameters*

In some figures, such as Figure 77-15, the MA_DATA.request primitive is shown with its parameters. In other figures, such as Figure 77-6, no parameters are shown. A consistent method should be decided upon.

*SuggestedRemedy*

Show parameters in the following figures: 77-3, 77-6, 77-7, 77-8,

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.2.2.1** *P* **165** *L* **45** # 2295

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

tailGuard constant value is not correct. The text says "This constant holds the value used to reserve space at the end of the upstream transmission at the ONU in addition to the size of last MAC service data unit (m_sdu) in units of octets. Space is reserved for the MAC overheads including: preamble, SFD, DA, SA, Length/Type, FCS, and minimum inter-packet gap.". Simple calculation amounts to 38 bytes and not 42: 8 (preamble) + 12 (DA+SA) + 2 (size/type) + 4 (FCS) + 12 (IPG) = 38. Unless calculation is incorrect, value should be changed from 42 to 38.

*SuggestedRemedy*

Change value from 42 to 38, following the calculation 8 (preamble) + 12 (DA+SA) + 2 (size/type) + 4 (FCS) + 12 (IPG) = 38. If other components are included in the tailGuard and not listed, update the description of the variable accordingly.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.2.2.4** *P* **168** *L* **14** # 2425

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The FEC overhead function needs to be updated to take into account the new mechanism for calculating overhead.

*SuggestedRemedy*

Update formula per 3av_0807_kramer_3.pdf.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Considered together with #2413
See 3av_0809_joint_1.pdf for description of changes to be introduced in C77.

*Cl* **77** *SC* **77.2.2.4** *P* **168** *L* **21** # 2297

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

For FEC encoder adds 32 parity octets for each block of 216 data or control octets, ((frameLen+preLen+ipgLen)/colSize×blockSize) should be multiplied by 32 in the formula. But the parityRatio is 8. Eg. (512+8+12)/(4*54)*8 = 16 [blocks]. Should be (512+8+12)/(4*54)*8*4 = 64 [bytes].

*SuggestedRemedy*

Change"parityRatio" to "parityRatio×colSize" in final multiplication for the formula to read "((frameLen+preLen+ipgLen()/colSize×blockSize))x(parityRatio×colSize)"

*Response* *Response Status* **C**

REJECT.
[Keep open to after lunch]
This has been superceded in Comment #2425

---

Change formula for FEC_overhead_min to read as follows:
"FEC_overhead_min = floor((frameLen + preLen + ipgLen) / (colSize×blockSize)) x (parityRatio×colSize)".

*Cl* **77** *SC* **77.2.2.7** *P* **171** *L* **7** # 2333

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *Figure 77-10 transit condition*

Figure 77-10 is affected. Transition between states WAIR FOR RECEIVE and PARSE OPCODE has a condition but a condition does not seem to have any logical operators included. Currently it reads "MAC:MA_DATA.indication(DA, SA, data_rx, receiveStatus) Length/Type = MAC_Control_type"

*SuggestedRemedy*

Change description (Figure 77-10) of the transition condition between states WAIR FOR RECEIVE and PARSE OPCODE from "MAC:MA_DATA.indication(DA, SA, data_rx, receiveStatus) Length/Type = MAC_Control_type" to "MAC:MA_DATA.indication(DA, SA, data_rx, receiveStatus) * Length/Type = MAC_Control_type"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.2.2.7** *P* **171** *L* **8** # 2144

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.indication primitive*

This comment is against Figure 77-10. The MA_DATA.indication primitive needs to include the Length/Type field. The same change should be made in two places on line 8 and also on line 12.

*SuggestedRemedy*

MA_DATA.indication(DA, SA, {Length/Type, data_rx}, receiveStatus)

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.2.2.7** *P* **171** *L* **9** # 2145

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *Figure 77-10 transit condition*

The exit condition from WAIT FOR RECEIVE to PARSE OPCODE is missing an operator between the two conditions. These two conditions should have an AND between them.

*SuggestedRemedy*

MA_DATA.indication(...) * Length/Type = MAC_Control_Type

*Response* *Response Status* **C**

ACCEPT.
See comment #2333.

*Cl* **77** *SC* **77.2.2.7** *P* **172** *L* **8** # 2146

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.indication primitive*

This comment is against Figure 77-11. The MA_DATA.indication primitive needs to include the Length/Type field. The same change should be made in two places on line 8 and also on line 12.

*SuggestedRemedy*

MA_DATA.indication(...) * Length/Type = MAC_Control_Type

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.2.2.7** *P* **173** *L* **9** # 2135

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *, MA_DATA.request primitive*

This comment is against Figure 77-12. There are three parameters that are part of the MA_DATA.request primitive: DA, SA, and data_tx. In the 2005 version of the standard, there were four parameters that were passed in the TransmitFrame function: DA, SA, Length/Type, and data_tx. The way it is currently written, the Length/Type field is included in the data_tx parameter. This means that the indices are off by the length of the Length/Type field. The Length/Type field should be explicitly added into the primitive such that the data parameter is the concatenation of Length/Type and data_tx.

*SuggestedRemedy*

On lines 9 and 36, replace with MA_DATA.request(DA, SA, {Length/Type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.2.2.7** *P* **174** *L* **28** # 2302

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

In Figure 77-13, a 10G ONU must transmit an integral number of FEC words in its grant time. So nextTxtime should be nextTxTime = FEC_Overhead_Max(sizeof(data_tx) + tailGuard) / (colSize x parityRatio) x ((parityRatio + blockSize) x colSize), which further simplifies to nextTxTime = FEC_Overhead_Max(sizeof(data_tx) + tailGuard) / parityRatio x (parityRatio + blockSize). This assures that integral number of FEC words is transmitted in the grant allocated for it. Otherwise, part of the FEC word may be transmitted out of the grant slot.

*SuggestedRemedy*

Change current definition of nextTxTime to "nextTxTime = FEC_Overhead_Max(sizeof(data_tx) + tailGuard) / parityRatio x (parityRatio + blockSize)"

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

*Cl* **77** *SC* **77.2.2.7** *P* **174** *L* **9** # 2136

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *, MA_DATA.request primitive*

This comment is against Figure 77-13. The MA_DATA.request parameters need to be modified (see comment against Figure 77-12 for details).

*SuggestedRemedy*

On lines 9 and 37, replace with MA_DATA.request(DA, SA, {Length/Type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.2.27** *P* **172** *L* **18** # 2050

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *Figure 77-11 is bold*

In state diagram in Figure 77-11, in state PARSE TIMESTAMP, the first line of code looks bold.

*SuggestedRemedy*

Check and unbold

*Response* *Response Status* **C**

ACCEPT.
See comment #2338

*Cl* **77** *SC* **77.2.27** *P* **172** *L* **18** # 2338

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *Figure 77-11 is bold*

Figure 77-11 is affected. In state PARSE TIMESTAMP, the first line of code seem s to be bold.

*SuggestedRemedy*

Unbold it :)

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.2.1** *P* **175** *L* **44** # 2197

Woodward, Ted Telcordia Technologie

*Comment Type* **T** *Comment Status* **R** *[TO BE PROCESSED]*

Suggest to add note generalizing the comment that an ONU utilizing PAUSE feature may still receive SCB traffic. In fact, an ONU using PAUSE feature will not be able to impact any non-unique traffic (e.g. any extension of multi-cast groups, etc.) Going further into just how bad the use of a PAUSE feature in a network with significant propagation delay is a good idea in general.

*SuggestedRemedy*

Extend the note on PAUSE to indicate, for example, that 'ONU PAUSE commands will not affect SCB traffic, or any non-unique traffic to an ONU. Therefore, an ONU may continue receiving data frames even after issuance of a PAUSE request.'

*Response* *Response Status* **C**

REJECT.
[Subclause number was fixed]
[Page number was fixed]
The NOTE in line 48 says just that.

*Cl* **77** *SC* **77.3.2.3** *P* **176** *L* **27** # 181541

Remein, Duane Alcatel-Lucent

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

Invalid reference @@76.1.2.3.3.2@@

*SuggestedRemedy*

Change to:
@@76.1.6.2.3.2@@

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change to "76.1.6.2.3.2". Make sure the link is live

== Resolution from Denver 0806 Meeting ==
REJECT.

This comment was WITHDRAWN by the commenter. To be resubmitted by TF Chair against next draft.

Resubmit

==========

*Cl* **77** *SC* **77.3.2.4** *P* **176** *L* **35** # 1973

Dawe, Piers Avago

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

What does "MAC stack" mean? The word "stack" does not appear at all in 802.3 Section 1 or Section 4.

*SuggestedRemedy*

Replace "MAC stack" with whatever the proper term is.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Replace "the implemented MAC stack" to read "MAC".

*Cl* **77** *SC* **77.3.3** *P* **177** *L* **10** # 2051

Kramer, Glen Teknovus, Inc.

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

grammar

*SuggestedRemedy*

"on" should be "of"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.3** *P* **177** *L* **25** # 2334

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *ure 77-22 accompanying text*

Description of the Discovery Process is inconsistent with the actual state diagram behaviour. The text "Note that the echoed parameter values i.e. required OLT synchronization time and laser on/off times are delivered to the registering ONU for confirmation purposes only and their utilization is not prescribed in this specification." does not make sense since the said parameter s are parsed in the state diagram and used (e.g. syncTime value as per Figure 77-22). The same applies to laserOn / laserOff times

*SuggestedRemedy*

Delete the offending sentence.

*Response* *Response Status* **C**

ACCEPT.
See comment #2052

*Cl* **77** *SC* **77.3.3** *P* **177** *L* **25** # 2052

Kramer, Glen Teknovus, Inc.

*Comment Type* **TR** *Comment Status* **A** *ure 77-22 accompanying text*

"Note that the echoed parameter values i.e. required OLT synchronization time and laser on/off times are delivered to the registering ONU for confirmation purposes only and their utilization is not prescribed in this specification."

This sentence is technically incorrect. Accroding to the state diagram in Figure 77-22, the ONU should use the syncTime value it receives in the REGISTER message, even if this value is different from what it was in the discovery GATE. Same for laser on/off time.

*SuggestedRemedy*

Delete this sentence to be consistent with the state machine.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.3** *P* **177** *L* **3** # 1732

Lin, Rujian Shanghai Luster Terab

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

where multiple ONUs can access the PON simultaneously,

*SuggestedRemedy*

Correction: when multiple ONUs can access the PON simultaneously,

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.3** *P* **179** *L* **1** # 2332

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *A_DATA.request parameters*

Figure 77-15 contains MA_DATA.request primitive with parameters, while other figures, e.g. Figure 77-6 contains no parameters. One method of presentation should be selected and used consistently throughout the clause.

*SuggestedRemedy*

Decide if MA_DATA.request primitive is to be used with parameters or without them and use it consistently through the whole clause.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2137

*Cl* **77** *SC* **77.3.3.5** *P* **182** *L* **19** # 2340

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **ER** *Comment Status* **A** *[TO BE PROCESSED]*

Format of the Message definition is unreadable. Clause 64.3.3.5 contains much more readable version of the same type of definitions.

*SuggestedRemedy*

Please use more readable format of the Message definitions as per Clause 64.3.3.5.
Update Frame templates if necessary

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **77** *SC* **77.3.3.5** *P* **183** *L* **19** # 2114

Lynskey, Eric Teknovus

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

Unnecessary shall statement. Statements with the word "shall" should be reserved for requirements. There is no need to apply the shall to only one of the parameters of the message.

*SuggestedRemedy*

Replace with "...and speed(s) at which the registration attempt is made."

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **77** *SC* **77.3.3.5** *P* **183** *L* **34** # 1793

KIMURA, Mitsunobu Hitachi Communicatio

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

"Discovery Process is in the OLT." of "is" not needed in this sentence.

*SuggestedRemedy*

Should be "Discovery Process in the OLT."

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

---

*Cl* **77** *SC* **77.3.3.5** *P* **184** *L* **22** # 1794

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

The sentence "This parameter represents is the MAC address of the OLT." is incomplete.

*SuggestedRemedy*

Should be "This parameter represents the MAC address of the OLT.".

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Subclause number was fixed]
Change the offending sentence to:
"This parameter is the MAC address of the OLT.".

---

*Cl* **77** *SC* **77.3.3.5** *P* **184** *L* **49** # 1795

KIMURA, Mitsunobu Hitachi Communicatio

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

A period (".") is missed.

*SuggestedRemedy*

Should be "is in the OLT.".

*Response* *Response Status* **C**

ACCEPT.
[Subclause number was fixed]

---

*Cl* **77** *SC* **77.3.3.6** *P* **185** *L* **36** # 2138

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *, MA_DATA.request primitive*

This comment is against Figure 77-18. The MA_DATA.request primitive needs to include the MAC Control value in the Length/Type field. Also, there is no data variable in this state diagram, but rather a data_tx variable.

*SuggestedRemedy*

MA_DATA.request(DA, SA, {MAC_Control_type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.3.3.6** *P* **186** *L* **19** # 2301

Hajduczenia, Marek Nokia Siemens Networ

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

As shown in Figure 77-19, discoveryInformation, laserOnTime and laserOffTime should be parsed from data_rx instead of data_tx.

*SuggestedRemedy*

In Figure 77-19:
(1) change "discoveryInformation <= data_tx[64:79]" to "discoveryInformation <= data_rx[64:79]"
(2) change "laserOnTime <= data_tx[80:87]" to "laserOnTime <= data_rx[80:87]"
(3) change "laserOffTime <= data_tx[88:95]" to "laserOffTime <= data_rx[88:95]"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.3.6** *P* **186** *L* **47** # 2139

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *, MA_DATA.request primitive*

This comment is against Figure 77-20. The MA_DATA.request primitive needs to include the MAC Control value in the Length/Type field. Also, there is no data variable in this state diagram, but rather a data_tx variable.

*SuggestedRemedy*

MA_DATA.request(DA, SA, {MAC_Control_type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.3.3.6** *P* **187** *L* **1** # 2296

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **R** *[TO BE PROCESSED]*

Figure 77-22 and Figure 77-28 need an update. Motivation for change is presented in 3av_0809_hajduczenia_6.pdf: General outline of the problem:
(1) if ONU DBA client denies registration, NACK state is entered on Figure 77-22. Variable "registered" is false.
(2) in the result of a denied registration, this ONU should send a REGISTER_ACK MPCPDU with NACK flag set. For this, a time slot is necessary
(3) OLT allocates a slot for this ONU to send a REGISTER_ACK MPCPDU with NACK flag set. GATE MPCPDU with this slot reaches an ONU and is dropped (register flag is false, discovery is also false).
(4) ONU cannot effectively send a REGISTER_ACK MPCPDU with NACK flag set.
See suggested remedy field for suggested remedy.

*SuggestedRemedy*

Add a new variable to 77.3.3.2:
register_nack
TYPE: Boolean
This variable indicates whether registration was denied by ONU DBA client. It is set to true in NACK state on Figure 77-22 and set to false otherwise.

Modify Figure 77-22:
(1) add "register_nack <= false" in state WAIT
(2) add "register_nack <= true" in state NACK

Modify Figure 77-28:
modify condition
"else if (!discovery * registered * grant_number > 0)"
to read
"else if (!discovery * (registered + register_nack) * grant_number > 0)"

*Response* *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

*Cl* **77** *SC* **77.3.3.6** *P* **187** *L* **14** # 2140

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.request primitive*

This comment is against Figure 77-21. The MA_DATA.request primitive needs to include the MAC Control value in the Length/Type field. Also, there is no data variable in this state diagram, but rather a data_tx variable. The same change should be made on lines 14 and 41.

*SuggestedRemedy*

MA_DATA.request(DA, SA, {MAC_Control_type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.3.3.6** *P* **188** *L* **35** # 2141

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.request primitive*

This comment is against Figure 77-22. The MA_DATA.request primitive needs to include the MAC Control value in the Length/Type field. Also, there is no data variable in this state diagram, but rather a data_tx variable. The same change should be made on lines 16, 35, 36, and 48.

*SuggestedRemedy*

MA_DATA.request(DA, SA, {MAC_Control_type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.3.4.5** *P* **190** *L* **47** # 2053

Kramer, Glen Teknovus, Inc.

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

Grammar in the first sentence does not rlook right:

"The parameter valid, is a Boolean array with length of 8, '0' or false indicates that the corresponding status field is not present (the length of status field is 0),while '1' or true indicates that the corresponding status field is present (the length of status field is 2 octets). The index of the array is meant to reflect the same numbered priority queue in the IEEE 802.1P nomenclature."

*SuggestedRemedy*

Use this text:

"The parameter valid is a Boolean array of length of 8. The index of an element of this array reflects the numbered priority queue in the IEEE 802.1P nomenclature. An element with the value of '0' or false indicates that the corresponding status field is not present (the length of status field is 0),while '1' or true indicates that the corresponding status field is present (the length of status field is 2 octets)"

Same change should be made on page 191, line 13

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.4.5** *P* **191** *L* **18** # 1796

KIMURA, Mitsunobu Hitachi Communicatio

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

Sentences of L18 and L19 are not placed properly. These explain "report_list".

*SuggestedRemedy*

Sentences of L18 and L19 should be placed right after L17.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Subclause number was fixed]
L18 and L19 will be aligned with L17.

*Cl* **77** *SC* **77.3.4.6** *P* **192** *L* **21** # 2142

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.request primitive*

This comment is against Figure 77-25. The MA_DATA.request primitive needs to include the MAC Control value in the Length/Type field. Also, there is no data variable in this state diagram, but rather a data_tx variable. The same change should be made in two places on line 22.

*SuggestedRemedy*

MA_DATA.request(DA, SA, {MAC_Control_type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.3.5.2** *P* **194** *L* **49** # 2116

Lynskey, Eric Teknovus

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

Typo.

*SuggestedRemedy*

Replace "date" with "data".

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.5.6** *P* **197** *L* **43** # 2143

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *MA_DATA.request primitive*

This comment is against Figure 77-25. The MA_DATA.request primitive needs to include the MAC Control value in the Length/Type field. Also, there is no data variable in this state diagram, but rather a data_tx variable. The same change should be made in two places on line 43.

*SuggestedRemedy*

MA_DATA.request(DA, SA, {MAC_Control_type, data_tx}).

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Detailed list of changes is included in 3av_0809_lynskey_1.pdf.

*Cl* **77** *SC* **77.3.6** *P* **200** *L* **2** # 2054

Kramer, Glen Teknovus, Inc.

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

wrong order of words

*SuggestedRemedy*

"shown as" should be "as shown"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.6.1** *P* **201** *L* **31** # 2299

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

In Figure 77-13, the length of field "pad/reserved" for a regular granting GATE MPCPDU is 15-39. This is incorrect following simple calculations:
(1) calculation of the maximum pad size:46 (payload size) - 2 (Opcode) - 4 (timestamp) - 1 (flags) = 39 bytes;
(2) calculation of the minimum pad size :46 (payload size) - 2 (Opcode) - 4 (timestamp) - 1 (flags) - 4 x 6 bytes (slot start + slot length) = 15 bytes;

*SuggestedRemedy*

Change the length of field "pad/reserved" from "13-39" to "15-39" for regular granting GATE MPCPDU only.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **1** # 2336

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **E** *Comment Status* **A** *ole 77-3 and Table 77-4 order*

Table 77-3 should go after Table 77-4, which is referred to in text first.

*SuggestedRemedy*

Place Table 77-3 after Table 77-4 and replace their numbers accordingly.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **11** # 1734

Lin, Rujian Shanghai Luster Terab

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

Paragraphs:
c) Grant #n Length. .....
d) Grant #n Start Time. .....

*SuggestedRemedy*

Propose to inter-change the order of the two paragrapns as:
c) Grant #n Start Time. .....
d) Grant #n Length. .....
according the order of GATE MPCPDU from top to bottom

*Response* *Response Status* **C**

ACCEPT.
[Page number was fixed]
Lines 11 through 15 are affected

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **12** # 2122

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Several meetings ago, we decided to let the OLT calculate FEC overhead and let the ONU report data and IPG, rounded up to the nearest TQ. We should be more explicit on defining this mechanism.

*SuggestedRemedy*

Change sentence to read "The laserOnTime, syncTime, laserOffTime, burst delimiter, initial IDLE blocks, FEC overhead, and burst terminator are included in and thus consume part of the Grant #n length."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change sentence to read "The laserOnTime, syncTime, laserOffTime, BURST_DELIMITER, two initial Idle blocks, FEC parity overhead, and burst terminator sequence (composed of three END_BURST_DELIMITER blocks) are included in and thus consume part of the Grant #n length."

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **18** # 2335

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **TR** *Comment Status* **A** *Sync Time in REGISTER*

Invalid description of the SyncTime in the GATE MPCPDU description. The text " During the synchronization time the ONU shall send a synchronization pattern of 0x55 (transmission bit sequence 1010 ...) followed by a burst delimiter and idle blocks as defined in @@Subclause 76.2.3.5@@." is not correct any more since the synchronization pattern was altered. See 76.2.3.5 for correct sync pattern.

*SuggestedRemedy*

Modify the sentence "During the synchronization time the ONU shall send a synchronization pattern of 0x55 (transmission bit sequence 1010 ...) followed by a burst delimiter and idle blocks as defined in @@Subclause 76.2.3.5@@." to read "During the synchronization time the ONU shall send a synchronization pattern followed by a burst delimiter and idle blocks as defined in @@Subclause 76.2.3.5@@."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2056

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **18** # 2056

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *ED] Sync Time in REGISTER*

"During the synchronization time the ONU shall send a synchronization pattern of 0x55 (transmission bit sequence 1010 ...) followed by a burst delimiter and idle blocks as defined in @@Subclause 76.2.3.5@@."

Sync pattern has been changed

*SuggestedRemedy*

Use

"During the synchronization time the ONU shall send a synchronization pattern followed by a burst delimiter and idle blocks as defined in @@Subclause 76.2.3.5@@."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2115

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **3** # 2055

Kramer, Glen Teknovus, Inc.

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

Missing hyphen

line 3: "8 bit flag"
line 11: "16 bit unsigned field"
line 15: "32 bit unsigned field."
line 18: "16 bit value"
line 25: "16 bit flag"

Also on page 206
line 6: "8 bit flag"
line 7: "8 bit value"
line 10: "16 bit flag"

*SuggestedRemedy*

The above should be:

line 3: "8-bit flag"
line 11: "16-bit unsigned field"
line 15: "32-bit unsigned field."
line 18: "16-bit value"
line 25: "16-bit flag"

Also on page 206
line 6: "8-bit flag"
line 7: "8-bit value"
line 10: "16-bit flag"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **33** # 2057

Kramer, Glen Teknovus, Inc.

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

Sentence is dificult to read:
"The GATE MPCPDU shall be generated by a MAC Control instance mapped to an active ONU, and as such shall be marked with a unicast type of LLID, except when the discovery flag is set where the MAC Control instance is mapped to all ONUs and such frame is marked by the appropriate broadcast LLID (Subclause 77.3.2.3)."

*SuggestedRemedy*

Split into two sentences, as shown below:

"The GATE MPCPDU shall be generated by a MAC Control instance mapped to an active ONU, and as such shall be marked with a unicast type of LLID, except when the MPCPDU is a discovery GATE, as indicated by the discovery flag being set to true. For the discovery procedure, a MAC Control instance is mapped to all ONUs, and thereforem the discovery GATE MPCPDU is marked with the appropriate broadcast LLID (Subclause 77.3.2.3)."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

"The GATE MPCPDU shall be generated by a MAC Control instance mapped to an active ONU, and as such shall be marked with a unicast type of LLID, except when the MPCPDU is a discovery GATE, as indicated by the discovery flag being set to true. For the discovery procedure, a MAC Control instance is mapped to all ONUs, and therefore, the discovery GATE MPCPDU is marked with the appropriate broadcast LLID (see 77.3.2.3)."

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **38** # 1735

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *ole 77-3 and Table 77-4 order*

Table 77-3--GATE MPCPDU Discovery Information Fields

*SuggestedRemedy*

Changed to:
Table 77-4--GATE MPCPDU Discovery Information Fields

*Response* *Response Status* **C**

ACCEPT.
See comment #2336

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **4** # 1733

Lin, Rujian Shanghai Luster Terab

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

The Number of grants field

*SuggestedRemedy*

Modified to:
As presented in Table 77-3, the Number of grants field

*Response* *Response Status* **C**

ACCEPT.
Make sure it is implemented together with comment #2336

*Cl* **77** *SC* **77.3.6.1** *P* **202** *L* **5** # 1797

KIMURA, Mitsunobu Hitachi Communicatio

*Comment Type* **E** *Comment Status* **R**

"valid Length, Start Time pairs" is shown. The comma could be replaced as "and".

*SuggestedRemedy*

Should be "valid Length and Start Time pairs".

*Response* *Response Status* **C**

REJECT.
[Subclause number was fixed]
Pairs of parameters are typically represented using a comma.

*Cl* **77** *SC* **77.3.6.1** *P* **203** *L* **1** # 1736

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *ble 77-3 and Table 77-4 order*

Table 77-4--GATE MPCPDU Number of Grants/Flags Fields

*SuggestedRemedy*

Changed to:
Table 77-3--GATE MPCPDU Number of Grants/Flags Fields

According the order of Gate MPCPDU from top to bottom. It is better to position Table 77-3--GATE MPCPDU Number of Grants/Flags Fields prior to Table 77-4--GATE MPCPDU Discovery Information Fields.

*Response* *Response Status* **C**

ACCEPT.
See comment #2336

*Cl* **77** *SC* **77.3.6.2** *P* **204** *L* **8** # 2121

Lynskey, Eric Teknovus

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

Several meetings ago, we decided to let the OLT calculate FEC overhead and let the ONU report data and IPG, rounded up to the nearest TQ. We should be more explicit on defining this mechanism.

*SuggestedRemedy*

"The reported length shall be adjusted and rounded up to the nearest time_quantum to account for the necessary inter-frame spacing and preamble. FEC overhead is not included in the reported length."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.

"The reported length shall be adjusted and rounded up to the nearest time_quantum to account for the necessary inter-frame spacing and preamble. FEC parity overhead is not included in the reported length."

*Cl* **77** *SC* **77.3.6.3** *P* **206** *L* **6** # 1737

Lin, Rujian Shanghai Luster Terab

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

b)Flags.....for the registration.

*SuggestedRemedy*

Modified to:
b)Flags.....for the registration, as presented in Table 77-6.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.6.4** *P* **207** *L* **47** # 1738

Lin, Rujian Shanghai Luster Terab

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

d) Flags. this is..... for the registration.

*SuggestedRemedy*

Modified to
d) Flags. This is..... for the registration, as presented in Table 77-8.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.3.6.4** *P* **208** *L* **13** # 2117

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The definition of sync time for the REGISTER message does not match that of the GATE message. It still contains the Clause 64 definition. The sentence starting "During the synchronization time..." should match the text on page 202 line 19.

*SuggestedRemedy*

"During the synchronization time the ONU shall send a synchronization pattern of 0x55 (transmission bit sequence 1010...) followed by a burst delimiter and idle blocks as defined in Subclause 76.2.3.5.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2115

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*Cl* **77** *SC* **77.3.6.5** *P* **209** *L* **21** # 1739

Lin, Rujian Shanghai Luster Terab

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

b) Flags. This is.....for the registration. Echoed assigned port. This field holds a 16 bit unsigned value reflecting the LLID for the port assigned following regustration.
c) Echoed Sync Time. This is .....
d) Pad/Reserved. This is.....

*SuggestedRemedy*

modified to:
b) Flags. This is.....for the registration, as presented in Table 77-9.
c) Echoed assigned port. This field holds a 16 bit unsigned value reflecting the LLID for the port assigned following registration.
d) Echoed Sync Time. This is .....
e) Pad/Reserved. This is.....

*Response* *Response Status* **C**

ACCEPT.
[Page number was fixed]
Lines 21 - 27 are affected

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*Cl* **77** *SC* **77.4** *P* **210** *L* **36** # 1629

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *OCESSED], Legacy keyword*

This says "coexistence of 10G-EPON with legacy EPON."
The term "legacy" suggests that EPON is out of date.

*SuggestedRemedy*

change to "coexistence of 10G-EPON with EPON."

*Response* *Response Status* **C**

ACCEPT.
See comment #1613.

---

*Cl* **77** *SC* **77.4.1** *P* **210** *L* **38** # 2060

Kramer, Glen Teknovus, Inc.

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

Speed-specific should have a hyphen

*SuggestedRemedy*

Add on lines 38, 42, and line 44 on page 211

*Response* *Response Status* **C**

ACCEPT.

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*Cl* **77** *SC* **77.4.1** *P* **210** *L* **43** # 1740

Lin, Rujian Shanghai Luster Terab

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

that may co-exist on the same PON.

*SuggestedRemedy*

Correction:
that may co-exist in the same PON.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **1** # 1741

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

discovery windows by sending discovery GATE MPCPDUs on both the 1 GFb/s and 10 Gb/s downstream broadcast channels.

*SuggestedRemedy*

Correction:
discovery windows by sending discovery GATE MPCPDUs in both the 1 GFb/s and 10 Gb/s downstream broadcast channels.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Page number was fixed]
Change
"For some combinations, it is necessary for the OLT MAC Control Client to open overlapping discovery windows by sending discovery GATE MPCPDUs on both the 1 Gb/s and 10 Gb/s downstream broadcast channels."
to
"For some combinations, it may be desirable for the OLT MAC Control Client to open overlapping discovery windows. It may do so by sending one discovery GATE MPCPDU on 1 Gb/s downstream channel and a similar discovery GATE MPCPDU on 10 Gb/s downstream channel; both discovery GATE MPCPDUs having the same Start Time value."

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **18** # 2059

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *Table 77-10 changes*

Table footnote is confusing

*SuggestedRemedy*

replace:

"Two discovery GATE MPCPDUs are transmitted in the downstream broadcast channel:"

with

"Two discovery GATE MPCPDUs are transmitted in two separate downstream broadcast channels:"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Resolved in comment #2063

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **19** # 1742

Lin, Rujian Shanghai Luster Terab

*Comment Type* **E** *Comment Status* **A** *Table 77-10 changes*

transmitted on the 1Gb/s downstream broadcast channel and another one the LLID of 0x7FFE transmitted on the 10 Gb/s downstream broadcast channel.

*SuggestedRemedy*

modified to:
transmitted in the 1Gb/s downstream broadcast channel and another one the LLID of 0x7FFE transmitted in the 10 Gb/s downstream broadcast channel.

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Resolved in comment #2063

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **27** # 2061

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *Figure 77-36 changes*

Figure 77-36 is not very clear.

*SuggestedRemedy*

Add a sub-caption to each diagram:
(a) Discovery window opened for 1 Gb/s upstream transmissions
(b) Discovery window opened for 10 Gb/s upstream transmissions
(c) Discovery window opened for 1 Gb/s amd 10Gb/s upstream transmissions

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2337

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **27** # 2337

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *SED], Figure 77-36 changes*

Figure 77-36 is affected. It is not clear at the moment what is what - some captions under each options should be added. See Suggested Remedy for proposal of captions

*SuggestedRemedy*

Add captions for individual cases:
Case (a) Discovery window opened for 1 Gb/s upstream transmission
Case (b) Discovery window opened for 10 Gb/s upstream transmission
Case (c) Discovery window opened for 1 Gb/s and 10 Gb/s upstream transmission

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Insert the following tags for individual cases:
"(a) Discovery window opened for 1 Gb/s upstream transmission"
"(b) Discovery window opened for 10 Gb/s upstream transmission"
"(c) Discovery window opened for both 1 Gb/s and 10 Gb/s upstream transmission"

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **40** # 1743

Lin, Rujian Shanghai Luster Terab

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

Figure 77-36--Combinations of.....coexisting on the same PON.

*SuggestedRemedy*

Modified to:
Figure 77-36--Combinations of.....coexisting in the same PON.

*Response* *Response Status* **C**

ACCEPT.
[Page number was fixed]

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **6** # 2063

Kramer, Glen Teknovus, Inc.

*Comment Type* **TR** *Comment Status* **A** *SSED], Table 77-10 changes*

Values in table 77-10 contradic values in table 77-3. Table 77-3 says that the Discovery Information with all bits set to '0' means that the OLT is capable of 1Gb/s only and is opening 1Gb/s window.

Table 77-10 says that for 1G/1G discovery, the values of Discovery Information field should be '1010' (for bits of interest)

For Discovery Information field being all zeroes field to mean 1Gb/s discovery was necessary when we wanted to combine clause 93 (77 now) and clause 64 into one. It is not necessary anymore. We can simply state that the Discovery Information field is not present in the 1G/1G messages, as we currently do for laser on and laser off times.

*SuggestedRemedy*

1) Change tables 77-3 and 77-10 as shown in 3av_0809_kramer_1.pdf

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Table 77-1 in 3av_0809_kramer_1.pdf should be Table 77-3
Table 77-2 in 3av_0809_kramer_1.pdf should be Table 77-10
Aling with comment #1742, #2059 and #2058

*Cl* **77** *SC* **77.4.1** *P* **211** *L* **7** # 2058

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *Table 77-10 changes*

The meaning of the first column in table 77-11 should be clarified.

*SuggestedRemedy*

Change column caption to read;

"ONU types targeted by discovery GATE [DS/US transmission speed]"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Probably Table 77-10 is referred to.
Resolved in comment #2063

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **44** # 2068

Kramer, Glen Teknovus, Inc.

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

We need to be more explicit about which LLID is used in registration by various ONUs.

*SuggestedRemedy*

Suggest the following text to be added after the Table 77-11:

"The ONU generates the REGISTER_REQ MPCPDU with the same LLID as the discovery GATE MPCPDU it responds to, i.e., 1Gb/s ONU (per Clause 64) will use LLID 0xFFFF, while the 10/1Gb/s ONUs and 10/10Gb/s ONUs will use LLID 0xFFFE."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
"The ONU generates the REGISTER_REQ MPCPDU with the same LLID as the discovery GATE MPCPDU it responds to, i.e., 1G-EPON ONU (per Clause 64) will use LLID 0xFFFF, while the 10/1G-EPON ONUs and 10G-EPON ONUs will use LLID 0xFFFE."

Mark external reference to Clause 64 appropriately.

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **45** # 1744

Lin, Rujian Shanghai Luster Terab

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

transmitted by the OLT on the 1 Gb/s broadcast channel.

*SuggestedRemedy*

Modified to:
transmitted by the OLT in the 1 Gb/s broadcast channel.

*Response* *Response Status* **C**

ACCEPT.
[Page number was fixed]

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **45** # 1630

Anslow, Peter Nortel Networks

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*

This says "A legacy 1 Gb/s ONU will". The term "legacy" suggests that EPON is out of date.

*SuggestedRemedy*

Change to "A 1 Gb/s EPON ONU will"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Resolved in comment #1615

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **47** # 2069

Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *ıse 64 reference in Clause 77*

"Operation and registration of these ONUs remains the same as previously, since no changes have been made to the existing 1 Gb/s discovery process."

It may be unclear to readers what "previously" means.

*SuggestedRemedy*

Change this sentence to:

"Operation and registration of these ONUs is defined in Clause 64."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See comment #2339

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **47** # 2339

Hajduczenia, Marek Nokia Siemens Networ

*Comment Type* **T** *Comment Status* **A** *ıse 64 reference in Clause 7*

Unclear reference to 1G EPON specs in the sentence "Operation and registration of these ONUs remains the same as previously, since no changes have been made to the existing 1 Gb/s discovery process.". This needs to refer to Clause 64 most likely.

*SuggestedRemedy*

Change "Operation and registration of these ONUs remains the same as previously, since no changes have been made to the existing 1 Gb/s discovery process." to "Operation and registration of these ONUs is specified in Clause 64". Make sure that the link is available between the clauses.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **50** # 1745

Lin, Rujian Shanghai Luster Terab

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

transmitted by the OLT on the 10 Gb/s broadcast channel.

*SuggestedRemedy*

Modified to:
transmitted by the OLT in the 10 Gb/s broadcast channel.

*Response* *Response Status* **C**

ACCEPT.
[Page number was fixed]

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **51** # 2062

Kramer, Glen Teknovus, Inc.

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

"These messages need to be parsed..."

This sentence is ambiguous. Messages need to be parsed, but are not? If they are parsed, say so.

*SuggestedRemedy*

Replace with "These messages are parsed..."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.4.2** *P* **211** *L* **52** # 1746

Lin, Rujian Shanghai Luster Terab

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

the ONU may attempt to register on the EPON.

*SuggestedRemedy*

Modified to:
the ONU may attempt to register in the EPON.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.4.2** *P* **212** *L* **10** # 2064
Kramer, Glen Teknovus, Inc.

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

Many rows in table 77-11 are redundant and can be collapsed

*SuggestedRemedy*

Use table as shown in 3av_0809_kramer_2.pdf

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Use table as shown in 3av_0809_kramer_2.pdf with a change in the Table number from 77-1 to 77-11.

*Cl* **77** *SC* **77.4.2** *P* **212** *L* **2** # 1747
Lin, Rujian Shanghai Luster Terab

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

transmitted by the OLT on the 10 Gb/s broadcast channel.

*SuggestedRemedy*

Modefied to:
transmitted by the OLT in the 10 Gb/s broadcast channel.

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.4.2** *P* **212** *L* **4** # 2065
Kramer, Glen Teknovus, Inc.

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

typo

*SuggestedRemedy*

Remove word "based" in

"The ONU should attempt to register based during the discovery window announced as supporting the highest speed common to both the OLT and ONU."

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.4.2** *P* **212** *L* **4** # 1748
Lin, Rujian Shanghai Luster Terab

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

The ONU should attempt to register based during the discovery window.....

*SuggestedRemedy*

Correction:
The ONU should attempt to register during the discovery window.....

*Response* *Response Status* **C**

ACCEPT.
See comment #1748

*Cl* **77** *SC* **77.5.3** *P* **214** *L* **19** # 2066
Kramer, Glen Teknovus, Inc.

*Comment Type* **TR** *Comment Status* **A** *[TO BE PROCESSED]*

The PICS statement CC1 is incorrect. The shall statement in 77.3.2.4 only refers to the MAC delay variation.

*SuggestedRemedy*

Remove "and PHY"

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change Comment in CC1 from "Maximum delay variation of 16 ns (1 time_quantum)" to "Maximum delay variation of 1 time_quantum"
Change Feature in CC1 from "Delay through MAC and PHY" to "Delay through MAC"

*Cl* **77** *SC* **77.5.4.1** *P* **214** *L* **27** # 2067
Kramer, Glen Teknovus, Inc.

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

The PICS comment should be clarified and better match the shall statement.

*SuggestedRemedy*

Use this text:
"Not grant more than one message every 1024 time_quanta to a single ONU"

*Response* *Response Status* **C**

ACCEPT.

*Cl* **77** *SC* **77.5.4.4** *P* **216** *L* **15** # 2115

Lynskey, Eric Teknovus

*Comment Type* **T** *Comment Status* **A** *[TO BE PROCESSED]*

The value/comment for item MP5 is incorrect. The 0x55 pattern and burst delimiter is transmitted during the synchronization time.

*SuggestedRemedy*

Replace value/comment with, "Transmit sync pattern (0x55...), BD, and IDLE."

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
[Changed from "E" to "T"]

On page 202 replace "shall" (ln. 19) statement with "ONU calculates the effective grant length by subtracting the syncTime, laserOnTime, laserOffTime, BURST_DELIMITER and END_BURST_DELIMITER from the grant length it received from the OLT."

Apply the same change to Sync Time description in REGISTER MPCPDU.

Remove PICS statement MP5.

---

*Cl* **99** *SC* *P* **1** *L* **2** # 1989

Brown, Alan Wave7 Optics, Inc.

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

Correctly spell "Amendment".

*SuggestedRemedy*

Correctly spell "Amendment" in line 2 and line 30.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **99** *SC* *P* **1** *L* **2** # 2070

Kramer, Glen Teknovus, Inc.

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

Typo

*SuggestedRemedy*

Amendement = Amendment
Same on line 30

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **99** *SC* *P* **1** *L* **29** # 2247

Ganga, Ilango Intel

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

It appears that the description here has not been updated since the Task Force review. Update the text in this paragraph as appropriate.

*SuggestedRemedy*

As per comment

*Response* *Response Status* **C**

ACCEPT IN PRINCIPLE.
See resolution to comments 1801, 1990

---

*Cl* **99** *SC* *P* **1** *L* **30** # 1801

Kawatsu, Yasuaki Hitachi Cable Ltd

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

This draft is a amendement of IEEE ...

*SuggestedRemedy*

I think this part can be corrected as "This draft is an amendment"

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **99** *SC* *P* **1** *L* **30** # 1990

Brown, Alan Wave7 Optics, Inc.

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

Start of 2nd sentence of paragraph was lost.

*SuggestedRemedy*

Add "It " to the 2nd sentence.

*Response* *Response Status* **C**

ACCEPT.

---

*Cl* **99** *SC* *P* **1** *L* **32** # 2101

Kramer, Glen Teknovus, Inc.

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

Text still shows D1.802

*SuggestedRemedy*

Update to latest draft version

*Response* *Response Status* **C**

ACCEPT.

*Cl* **99** *SC* *P* **2** *L* **1** # 1991
Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *[TO BE PROCESSED]*
The Abstract requires a description.

*SuggestedRemedy*
Enter an appropriate project description.

*Response* *Response Status* **C**
ACCEPT.
See resolution to comment #2262

*Cl* **99** *SC* *P* **2** *L* **1** # 2416
DIAB, WAEL BROADCOM

*Comment Type* **E** *Comment Status* **A**
Abstract information is missing.

*SuggestedRemedy*
Please insert

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

*Cl* **99** *SC* *P* **2** *L* **1** # 2246
Ganga, Ilango Intel

*Comment Type* **E** *Comment Status* **A**
Add abstract of this amendment 802.3av here

*SuggestedRemedy*
As per comment

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

*Cl* **99** *SC* *P* **2** *L* **4** # 2417
DIAB, WAEL BROADCOM

*Comment Type* **E** *Comment Status* **A**
Would suggest adding additional keywords

*SuggestedRemedy*
Add 10GEPON

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

*Cl* **99** *SC* *P* **3** *L* **10** # 1988
Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *typo*
Correctly spell "consecutively".

*SuggestedRemedy*
Correctly spell "consecutively".

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

*Cl* **99** *SC* *P* **3** *L* **8** # 1992
Brown, Alan Wave7 Optics, Inc.

*Comment Type* **E** *Comment Status* **A** *typo*
"One exceptions"

*SuggestedRemedy*
Correct to "One exception".

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

*Cl* **99** *SC* **0** *P* **3** *L* **15** # 2248
Ganga, Ilango Intel

*Comment Type* **E** *Comment Status* **A**
On page 3 line 15, Update Amendment name here

Also on page 6 line 20, update the list with WG members at the start of initial WG ballot.

*SuggestedRemedy*
As per comment

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

*Cl* **99** *SC* **99** *P* **10** *L* **1** # 1906
Dawe, Piers Avago

*Comment Type* **E** *Comment Status* **A**
No contents

*SuggestedRemedy*
Insert Contents pages after participants and before special symbols

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

*Cl* **99** *SC* **99** *P* **3** *L* **8** # 1905

Dawe, Piers Avago

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

conciously

*SuggestedRemedy*

consciously There are a few other typos: run the spell checker.

*Response* *Response Status* **C**

ACCEPT.