

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
 == 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This comment was WITHDRAWN by the commenter.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.

=====

<i>Cl</i> 00	<i>SC</i> 0	<i>P</i>	<i>L</i>	<i>#</i> 2171
Woodward, Ted		Telcordia Technologie		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	<i>PageNum</i>

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Include objectives in Frontmatter abstract.

<i>Cl</i> 00	<i>SC</i> 0	<i>P</i>	<i>L</i>	<i>#</i> 2172
Woodward, Ted		Telcordia Technologie		

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

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Elevate footer some.

<i>Cl</i> 00	<i>SC</i> 0	<i>P</i>	<i>L</i>	<i>#</i> 2196
Woodward, Ted		Telcordia Technologie		

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

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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Now accepting volunteers to generate this analysis.

<i>Cl</i> 00	<i>SC</i> 0	<i>P</i>	<i>L</i>	<i>#</i> 2251
Ganga, Ilango		Intel		

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

Proposed Response *Response Status* **W**

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

Cl 00 SC 0 P L # 2047
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D 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 occurrences of "i.e."
4 occurrences of "i.e.,"
5 occurrences of "ie."

SuggestedRemedy

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

Do global search and replace.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 00 SC 0 P L # 2169
Woodward, Ted Telcordia Technologie

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

It may be better to defer this to a latter time.

Cl 00 SC 0 P L # 2420
DIAB, WAEL BROADCOM

Comment Type TR Comment Status D

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED REJECT.

The nomenclature for all new PHYs was approved by the TF and presented to the 802.3 working group without significant opposition.

Cl 00 SC 0 P0 L0 # 2264
Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D 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 - "@@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@@>"
- page 62, line 39 - "@@Subclause 77.3.3.2@@>"
- page 63, line 37 - "@@Subclause 77.3.3.2@@>"
- page 68, line 16 - "@@Subclause 76.2@@>"
- page 71, line 33 - "@@Clause 76@@>"
- page 80, line 15 - "@@Subclause 76.3.2.1@@>"
- page 95, line 35 - "Clause 77"
- page 109, line 37 - "@@77.3.3.2@@>"
- page 138, line 44 - "75.3.1.4">"
- page 138, line 53 - "Subcause@@75.8@@>"
- page 139, line 11 - "@@Figure 75-3@@>"
- page 139, line 11 - "@@Figure 75-4@@>"
- page 139, line 12 - "@@Subclause 75.9.16@@>"
- page 139, line 20 - "@@Figure 75-3@@>"
- page 139, line 20 - "@@Figure 75-4@@>"
- page 139, line 22 - "@@Subclause 75.9.15@@>"
- page 144, line 27 - "@@76.3.3@@>"
- page 145, line 35 - "@@Subclause 76.2.2.4.3@@>"
- page 147, line 50 - "@@Figure 76-12@@ and @@Figure 76-13@@>"
- page 148, line 34 - "@@Figure 76-12@@ and @@Figure 76-13@@>"
- page 149, line 1 - "@@Figure 76-12@@ and @@Figure 76-13@@>"
- page 150, line 1 - "@@Figure 76-12@@ and @@Figure 76-13@@>"
- page 150, line 32 - "76.2.3.4">"

Missing external reference markup on:

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

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

SuggestedRemedy

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

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

<i>CI</i> 00	<i>SC</i> 0	<i>P0</i>	<i>L0</i>	# 2342
Hajduczenia, Marek		Nokia Siemens Networ		
<i>Comment Type</i>	ER	<i>Comment Status</i>	D	<i>Mpage</i>

General comment: page numbers in the template got mysteriously 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

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
See comment 2172

CI 00 SC 0 P0 L0 # 2346
Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D xref

After looking at the draft with the huge quantity of @@ markers, it makes some parts of the text hardly 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Suggest this be deferred along with 2169 and 1570 until we can do a complete overhaul of cross references (see comment 1570)

CI 00 SC 0 P0 L0 # 2345
Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D

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 signalign deletion.

Proposed Response Response Status W

PROPOSED ACCEPT.
See comment 2251

CI 00 SC 0 P0 L0 # 2344
Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See comment 2047

CI 00 SC 0 P0 L0 # 2343
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See Style Guide

CI 00 SC 0 P0 L0 # 2303
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D 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 occurrence of "asymmetrical" with "asymmetric".

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 00 SC 0 P1 L56 # 1904
Dawe, Piers Avago

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See comment 2172

CI 00 SC 0 P2 L1 # 2262
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Include Project Objectives (see comment 2171)

CI 00 SC 00 P L # 1631
Anslow, Peter Nortel Networks

Comment Type E Comment Status D joint

Throughout this draft there are many places where the readability 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.

Proposed Response Response Status W

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

CI 00 SC 00 P19 L13 # 1570
Anslow, Peter Nortel Networks

Comment Type E Comment Status D 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 occurrences of "@@" through the draft. Show external cross references some other way.

Proposed Response Response Status W

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

CI 00 SC 00 P202 L51 # 1999
Brown, Alan Wave7 Optics, Inc.

Comment Type E Comment Status D

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.

Proposed Response Response Status W

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

CI 00 SC 00 P58 L41 # 2016
Frazier, Howard Broadcom

Comment Type ER Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
[Moved to C00]

CI 00 SC 00 P60 L1 # 1766
KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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 P60 L3 # 2017
 Frazier, Howard Broadcom

Comment Type ER Comment Status D 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.

Proposed Response Response Status W
 PROPOSED ACCEPT.
 [Moved to C00]

Cl 00 SC 1.4.95 P12 L29 # 1908
 Dawe, Piers Avago

Comment Type E Comment Status D 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.)"

Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved from c01 to c00

Cl 00 SC 56.1 P35 L2 # 1982
 Dawe, Piers Avago

Comment Type ER Comment Status D 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.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Will accommodate if time permits.
 Moved to c00

Cl 00 SC 76.2.2.1 P108 L36 # 1942
 Dawe, Piers Avago

Comment Type T Comment Status D 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

Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c00

Cl 00 SC 76.2.2.4.1 P113 L34 # 1955
 Dawe, Piers Avago

Comment Type T Comment Status D 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!

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Per IEEE Style Manual all notes should be of the form "NOTE ..."
 Moved to c00

Cl 01 SC 1.3 P13 L11 # 1909
 Dawe, Piers Avago

Comment Type TR Comment Status D

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

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Will ensure register number do not clash.

CI 01 SC 1.4 P12 L15 # 2263
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D
 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"

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.4 P12 L15 # 2102
 Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D
 Labels repeated twice:

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

SuggestedRemedy
 Remove one lable on each line

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.4 P12 L15 # 1816
 D'Ambrosia, John Force10 Networks

Comment Type E Comment Status D
 "10GBASE-PR" is repeated twice

SuggestedRemedy
 delete redundant "10GBASE-PR" and bold text

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.4 P12 L15 # 1665
 Marris, Arthur Cadence

Comment Type E Comment Status D
 Duplicate definition names 10GBASE-PR:10GBASE-PR and 10/1GBASE-PRX:10/1GBASE-PRX

SuggestedRemedy
 Delete one of them.

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.4 P12 L15 # 1674
 Jessica, Jiang Salira

Comment Type E Comment Status D
 Duplicate word " 10GBASE-PR:"

SuggestedRemedy
 Remove the additional word

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.4 P12 L20 # 1675
 Jessica, Jiang Salira

Comment Type E Comment Status D
 Duplicate word "10/1GBASE-PRX:"

SuggestedRemedy
 Remove the duplicate word

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 01 SC 1.4 P12 L20 # 1817
 D'Ambrosia, John Force10 Networks

Comment Type E Comment Status D
 10/1GBASE-PRX is repeated twice.

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

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 01 SC 1.4 P12 L 30 # 1907
Dawe, Piers Avago

Comment Type T Comment Status D

Possible confusion between time-quantum and pause_quantum

SuggestedRemedy

add definitions for both

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 01 SC 1.4.95 P12 L 28 # 1632
Anslow, Peter Nortel Networks

Comment Type ER Comment Status D

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."

Proposed Response Response Status W

PROPOSED ACCEPT.

Moved to clause 01.

Cl 01 SC 76.1.3.2 P100 L 40 # 2374
Law, David 3Com

Comment Type ER Comment Status D

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Moved to c01

Add to abbreviations and only use TQ in PICS. (see comment 1939)

Cl 30 SC 30.11 P16 L 1 # 1914
Dawe, Piers Avago

Comment Type E Comment Status D

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. 802.3av doesn't.

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Will argue with Frame a bit, but not a high priority and may not get accomplished in next draft.

Cl 30 **SC 30.2** **P14** **L 13** # 2252
 Ganga, Ilango Intel

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

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

Proposed Response **Response Status** **W**

PROPOSED 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** **P14** **L 14** # 2265
 Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 30 **SC 30.3.2.1.2** **P14** **L 14** # 1688
 Joergensen, Thomas Vitesse Semiconducto

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

There is nothing like 10/1GBASE-PR

SuggestedRemedy

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

[Subclause number was fixed]

See comment #2266

Cl 30 **SC 30.3.2.1.2** **P14** **L 14** # 2266
 Hajduczenia, Marek Nokia Siemens Networ

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 30 **SC 30.3.2.1.2** **P14** **L 14** # 1676
 Jessica, Jiang Salira

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

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

SuggestedRemedy

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

See comment #2266

Cl 30 **SC 30.3.2.1.2** **P14** **L 20** # 1677
 Jessica, Jiang Salira

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

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

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 See comment #2266

Cl 30 **SC 30.3.2.1.3** **P14** **L 20** # 1689
 Joergensen, Thomas Vitesse Semiconducto

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

There is nothing names 10/1GBASE-PR

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 [Subclause number was fixed]
 See comment #2266

Cl 30 **SC 30.3.5** **P325** **L 46** # 1910
 Dawe, Piers Avago

Comment Type T **Comment Status D**

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

Proposed Response **Response Status W**
 PROPOSED 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
- (3) other changes which seem reasonable:
- 30.3.6.1.36 aOAMLocalErrFrameConfig, change "in terms of number of 100 ms intervals." to read "in terms of number of 100 ms intervals for 1000 Mb/s or 10 ms intervals for 10 Gb/s". > the number of errored seconds will increase statistically 10 times
 - 30.3.6.1.40 aOAMLocalErrFrameSecsSummaryConfig, change "in terms of number of 100 ms intervals." to read "in terms of number of 100 ms intervals for 1000 Mb/s or 10 ms intervals for 10 Gb/s". > the number of errored seconds will increase statistically 10 times

Cl 30 **SC 30.3.5.1.4** **P326** **L 41** # 1911
 Dawe, Piers Avago

Comment Type E **Comment Status D**

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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 [Page number was added per 802.3ayD2.2, section 2, page 325]
 See comment #1910.

Cl 30 SC 30.3.7 P246 L15 # 1912
Dawe, Piers Avago

Comment Type T Comment Status D

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

Proposed Response Response Status W

PROPOSED 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 P14 L26 # 1913
Dawe, Piers Avago

Comment Type TR Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 SC 30.5.1.1.15 P15 L13 # 1679
Jessica, Jiang Salira

Comment Type E Comment Status D

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 SC 30.5.1.1.15 P15 L7 # 2267
Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 SC 30.5.1.1.15 P15 L7 # 1678
Jessica, Jiang Salira

Comment Type E Comment Status D

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 30 **SC 30.5.1.1.15** **P15** **L 8** # 2258
Ganga, Ilango Intel

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

(1) 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 10G/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, 45.2.1.90 for 10GBASE-PR).;

Make sure all links are live!

(2) Alter description of 30.5.1.1.16 aFECUncorrectableBlocks as follows:

(.)

BEHAVIOUR DEFINED AS:

For 1000BASE-PX, 10GBASE-R, 10GBASE-PR or 10G/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, 45.2.1.91 for 10GBASE-PR).

Cl 30 **SC 30.5.1.1.16** **P15** **L 10** # 2161
Barrass, Hugh Cisco

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

[Subclause number was fixed]

Cl 30 **SC 30.5.1.1.16** **P15** **L 13** # 1569
Anslow, Peter Nortel Networks

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

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"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 30 **SC 30.5.1.1.2** **P14** **L 34** # 2411
Mandin, Jeff PMC Sierra

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

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 P17 L1 # 1920
Dawe, Piers Avago

Comment Type TR Comment Status D

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.

Proposed Response Response Status W

PROPOSED REJECT.

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 severely extend the startup time for any 10GEPON implementation 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 in ONU and OLT

Cl 31A SC 31A P17 L1 # 1918
Dawe, Piers Avago

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED REJECT.
See comment #1917

Cl 31A SC 31A P17 L1 # 1919
Dawe, Piers Avago

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED REJECT.
See comment #1917

Cl 31A SC 31A P17 L1 # 1917
Dawe, Piers Avago

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED REJECT.
MAC Control and Management is within the scope of our TF.
"The scope of this project is to amend IEEE Std 802.3 to add physical layer specifications and [BOLD]management parameters/[BOLD] for symmetric and/or asymmetric operation at 10 Gb/s on point-to-multipoint passive optical networks."

Cl 31A **SC 31A** **P17** **L11** # 1922
Dawe, Piers Avago

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

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"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

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

Cl 31A **SC 31A** **P17** **L13** # 2249
Ganga, Ilango Intel

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

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

SuggestedRemedy

Per comment

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

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

Cl 31A **SC 31A** **P17** **L26** # 1633
Anslow, Peter Nortel Networks

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

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

SuggestedRemedy

change to "EXTENSION (opcode 0xFFFE)"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

[Moved to C31A]

Cl 31A **SC 31A** **P17** **L30** # 1923
Dawe, Piers Avago

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

"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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

Comment needs to be discussed at the meeting with the ITU-T Liaison (FF). Decisions to restrict applicability and scope of the Extension message need to be coordinated.

Cl 31A **SC 31A** **P17** **L8** # 1921
Dawe, Piers Avago

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

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

SuggestedRemedy

Per comment

Proposed Response **Response Status** **W**

PROPOSED 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
- (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
- (4) Table 31A-6-REGISTER MAC Control indications needs to be extended, by adding a new row describing laser on and laser off times

Cl 31A SC 31A.1 P17 L 12 # 1915
Dawe, Piers Avago

Comment Type TR Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT.
[Subclause number was fixed]
[Page number was fixed]

Cl 31A SC 31A.6 P L 42 # 1916
Dawe, Piers Avago

Comment Type T Comment Status D

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")

Proposed Response Response Status W

PROPOSED REJECT.
[Page number was fixed]

Based on the discussion with Piers, it is hard to see this comment having much to do with 10G-EPON specifically and rather encompass a series of changes to 802.3 in general, which were never properly suggested to 802.3av during maintenance meetings. It is suggested to reject the comment and ask the commenter to submit a maintenance request.

Additional feedback received from the commenter:

"There is the general issue of no proper mandate to do this (yet) and if it is to be done, should be in separate draft. Similarly, the expertise to do it right may be in Maintenance rather than 10GEPON.

31.2 Layer architecture

MAC Control clients may include the Bridge Relay Entity, LLC, or other applications.

Need to mention your new MAC Control client. I expect you'll need to add a reference to an ITU-T document for OMCI or whatever.

31.3.1.4 Effect of receipt

The effect of receipt of this primitive by the MAC Control sublayer is opcode-specific. (See Annex 31A.)

Does this need extending?

31.3.2.2 Semantics of the service primitive The elements of the indication_operand_list are opcode-specific, and specified in Annex 31A, Annex 31B, and Clause 64.

Needs to mention 31C and does it need to mention 77?

31.4.1.1 Destination Address field

Permitted values for the Destination Address field may be specified separately for each MAC Control opcode in the annexes to Clause 31.

Do 64 and 77 need to be mentioned here? I don't understand the relationship between 31 and 64/77: I hope the standard is clear on this.

31.5.2 Control frame reception
(See Annex 31A and Annex 31B or Clause 64.)

Need to mention 31C and 77, or make general somehow: perhaps refer to Annex 31A?

Figure 31-4-Generic MAC Control Receive state diagram NOTE-The opcode-specific operation (per Annex 31A and Annex 31B, and Clause 64)

Same again. And shouldn't put a NOTE in a figure!

31.5.3.4 Opcode-independent MAC Control Receive state diagram The functions performed in the INITIATE MAC CONTROL FUNCTION state are opcode-specific, and are provided in Annex 31A, Annex 31B, and Clause 64.

Same again.

31.7 MAC Control client behavior

Since implementation of the MAC Control sublayer is optional, a MAC Control client cannot assume the existence of a MAC Control sublayer entity in a peer DTE.

Is that true for MPCP? Or is MPCP not covered by this sentence?

Insert new 31.8.2.2 Major capabilities/options Options for the various optional items: PAUSE, Clause 64 MPCP, Clause 77 MPCP, combination MPCP (And in its own draft, if it doesn't go into Clause 57, "EXTENSION"). Refer to 31.5.2 and 31A and the specific clauses/annexes e.g. 31B, 31C, 64, 77. Or are three MPCP options the same from Clause 31's point of view?

Table 31A-1-MAC Control opcodes

Need to mention Cl.77 in the third column, including 5 existing rows.

This is all deeply arcane and only a few of these points are to do with 10GEPON. If I were you, and I wanted this support of ITU-T management, I would prepare the PAR and 5 etc and pass the draft to maintenance!"

Cl 31C	SC 31C	P19	L 1	# 1924
Dawe, Piers		Avago		

Comment Type TR Comment Status D

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

Proposed Response Response Status W

PROPOSED REJECT.

It is not clear what the commenter means by the new MAC Control Category and what specific objects are to be added to clause 30. Commenter is invited to provide more specific material.

Cl 31C	SC 31C.2	P19	L 29	# 2170
Woodward, Ted		Telcordia Technologie		

Comment Type T Comment Status D

The methods for assigning, administering, 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

[Changed from "E" to "T"]

[Page number added]

[Subclause number was fixed]

Such a mechanism does not exist currently. No reference can be provided. I am not sure if 802.3av is the right group to define such rules. Most likely 802.1 would be the right group to discuss such topics - need to poll the group to see what is the consensus on this topic.

Cl 31C	SC 31C.3.1	P20	L 19	# 1925
Dawe, Piers		Avago		

Comment Type E Comment Status D

Font too small

SuggestedRemedy

Change 7 point to 8 point wherever practical

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

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

Cl 45 SC 2.1 P22 L16 # 2160
Barrass, Hugh Cisco

Comment Type T Comment Status D 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

Proposed Response Response Status W

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

Cl 45 SC 2.1.10.1 P23 L37 # 1761
KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D

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

SuggestedRemedy

"bit 1.11.9 indicates"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 2.1.88 P27 L45 # 2159
Barrass, Hugh Cisco

Comment Type T Comment Status D 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.

Proposed Response Response Status W

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

Cl 45 SC 2.1.88 P27 L46 # 2163
Barrass, Hugh Cisco

Comment Type T Comment Status D 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)

Proposed Response Response Status W

PROPOSED 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 P28 L14 # 1691
Joergensen, Thomas Vitesse Semiconducto

Comment Type T Comment Status D 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"

Proposed Response Response Status W

PROPOSED REJECT.
This has been discussed previously and it was decided to retain the bit that is always '1' for consistency

Cl 45 SC 2.1.90 P29 L1 # 2162
Barrass, Hugh Cisco

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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 45 P22 L # 1926
Dawe, Piers Avago

Comment Type E Comment Status D

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

Proposed Response Response Status W

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

Cl 45 SC 45 P27 L # 1976
Dawe, Piers Avago

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.
See resolution to comment 2272

Cl 45 SC 45.2.1 P22 L 20 # 1974
Dawe, Piers Avago

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment 2272

Cl 45 SC 45.2.1 P29 L54 # 2272
Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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_3.pdf

Cl 45 SC 45.2.1.10.1 P23 L37 # 1634
Anslow, Peter Nortel Networks

Comment Type ER Comment Status D

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."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Moved to c45
See resolution to 1761

Cl 45 SC 45.2.1.11 P25 L33 # 1818
D'Ambrosia, John Force10 Networks

Comment Type E Comment Status D

Table 45-12 is broken.

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC **45.2.1.11.1** P**26** L**34** # **1636**
 Anslow, Peter Nortel Networks

Comment Type TR **Comment Status D**
 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,"

Proposed Response **Response Status W**
 PROPOSED 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 D**
 "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 /

Proposed Response **Response Status W**
 PROPOSED 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 D**
 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."

Proposed Response **Response Status W**
 PROPOSED 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 D**
 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.

Proposed Response **Response Status W**
 PROPOSED 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 D**
 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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 45 SC **45.2.1.6** P**24** L**5** # **1635**
 Anslow, Peter Nortel Networks

Comment Type TR **Comment Status D**
 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"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 Moved to c45
 Was "ER" changed to "TR"

Cl 45 SC 45.2.1.6 P24 L 8 # 1572
 Anslow, Peter Nortel Networks

Comment Type E Comment Status D

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

Proposed Response Response Status W

PROPOSED ACCEPT.
 Moved to c45

Cl 45 SC 45.2.1.88 P28 L 14 # 1758
 Hirth, Ryan Teknovus

Comment Type T Comment Status D

FEC consumes ~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 than 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 than 10E-12 without FEC.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.88 P28 L 19 # 2269
 Hajduczenia, Marek Nokia Siemens Network

Comment Type T Comment Status D

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)

Proposed Response Response Status W

PROPOSED ACCEPT.
 Changed from "E" to "T"

Cl 45 SC 45.2.1.88.2 P28 L 28 # 1638
 Anslow, Peter Nortel Networks

Comment Type ER Comment Status D 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)".

Proposed Response Response Status W

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

Cl 45 SC 45.2.1.89 P28 L 40 # 1977
 Dawe, Piers Avago

Comment Type TR Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2272

Cl 45 SC 45.2.1.89 P28 L 46 # 2270
 Hajduczenia, Marek Nokia Siemens Network

Comment Type T Comment Status D

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)

Proposed Response Response Status W

PROPOSED REJECT.
 Changed from "E" to "T"
 Seems to be consistent with other subclauses, see
 45.2.1.84 10GBASE-R FEC ability register (Register 1.170)
 45.2.1.84.1 10GBASE-R FEC ability (1.170.0)
 in 802.3ay

Cl 45 SC 45.2.1.89.1 P28 L 49 # 2408
 Mandin, Jeff PMC Sierra

Comment Type T Comment Status D

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).

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2272

Cl 45 SC 45.2.1.89.2 P28 L 49 # 181561
 Lynskey, Eric Teknovus

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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 P29 L # 1979
 Dawe, Piers Avago

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2272

Cl 45 SC 45.2.1.90 P29 L 1 # 2330
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type T Comment Status D

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 subclause 45.2.1.90, Table 45-67, register 1.178.15:0, column R/W: RO, MW
 In subclause 45.2.1.90, Table 45-67, register 1.179.15:0, column R/W: RO, MW
 In subclause 45.2.1.91, Table 45-68, register 1.180.15:0, column R/W: RO, MW
 In subclause 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."

Proposed Response Response Status W

PROPOSED ACCEPT.
 See resolution to comment 2272

Cl 45 SC 45.2.1.90 P29 L4 # 181562
Lynskey, Eric Teknovus

Comment Type T Comment Status D resubmit references

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

SuggestedRemedy
Remove the sentence.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
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 45.2.3.32 register (3.77, 3.78)."

== 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 P29 L5 # 1978
Dawe, Piers Avago

Comment Type T Comment Status D

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

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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment 2272

Cl 45 SC 45.2.1.90 P29 L9 # 1573
Anslow, Peter Nortel Networks

Comment Type E Comment Status D 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."

Proposed Response Response Status W

PROPOSED ACCEPT.
Moved to c45

Cl 45 SC 45.2.1.91 P29 L26 # 2103
Kramer, Glen Teknovus, Inc.

Comment Type T Comment Status D

Clause refers to an incorrect PHY

SuggestedRemedy
10GBASE-R should be 10GBASE-PR

Proposed Response Response Status W

PROPOSED ACCEPT.
See resolution to comment 2272

Cl 45 **SC 45.2.1.91** **P29** **L 27** # 181563
 Lynskey, Eric Teknovus

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

Reference to Clause 74.

SuggestedRemedy
 Remove the sentence.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 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 False. This is a 32-bit counter. This variable is provided by a management interface that may be mapped to the 45.2.3.33 register (3.79, 3.80).

== 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 False. 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).

=====

Cl 45 **SC 45.2.1.91** **P29** **L 32** # 1574
 Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** *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."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 Moved to c45
 See resolution to comment 2272

Cl 45 **SC 45.2.1.92** **P16** **L 28** # 1692
 Lin, Rujian Shanghai Luster Terab

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

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"

Proposed Response **Response Status** **W**

PROPOSED REJECT.
 Changed from "E" to "T"
 No such paragraph (45.2.1.92) or table (45-69) in D2.0.

Cl 45 **SC 45.2.1.92** **P16** **L 31** # 1693
 Lin, Rujian Shanghai Luster Terab

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

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"

Proposed Response **Response Status** **W**

PROPOSED REJECT.
 Changed from "E" to "T"
 No such paragraph (45.2.1.92) or table (45-69) in D2.0.

Cl 45 SC 45.2.188 P27 L46 # 2257
Ganga, Ilango Intel

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

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.
See Resolution to comment 2160 and 2272

Cl 45 SC 45.2.188 P28 L4 # 2253
Ganga, Ilango Intel

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

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

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.
See Resolution to comment 2160 and 2272

Cl 45 SC 45.2.3 P30 L10 # 1639
Anslow, Peter Nortel Networks

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

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"

Proposed Response Response Status **W**

PROPOSED ACCEPT.
Moved to c45

Cl 45 SC 45.2.3 P30 L20 # 2271
Hajduczenia, Marek Nokia Siemens Networ

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

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)

Proposed Response Response Status **W**

PROPOSED ACCEPT.

Cl 45 SC 45.2.3 P30 L6 # 2254
Ganga, Ilango Intel

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

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

SuggestedRemedy

As per comment.

Proposed Response Response Status **W**

PROPOSED 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 P30 L8 # 1575
Anslow, Peter Nortel Networks

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

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)"

Proposed Response Response Status **W**

PROPOSED ACCEPT.
Moved to c45

Cl 45 SC 45.2.3.29 P30 L27 # 181564
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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 of the 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.

Proposed Response Response Status W

PROPOSED REJECT.

Perhaps someone will provide some text in advance of the meeting

== Resolution from Denver 0806 Meeting ==
REJECT.

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

=====

Cl 45 SC 45.2.3.29 P30 L30 # 2104
Kramer, Glen Teknovus, Inc.

Comment Type T Comment Status D

subclause refers to incorrect PHY

SuggestedRemedy

10GBASE-R should be 10GBASE-PR

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See 1680

Cl 45 SC 45.2.3.29 P30 L30 # 1680
Jessica, Jiang Salira

Comment Type E Comment Status D

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.3.29 P30 L32 # 181553
Lynskey, Eric Teknovus

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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 P31 L4 # 2255
Ganga, Ilango Intel

Comment Type ER Comment Status D PICS

Update appropriate PICS tables as applicable to 802.3av

SuggestedRemedy

Per comment

Proposed Response Response Status W

PROPOSED REJECT.

The comment's observation is correct, but no text is provided. Other comments are addressing specific PICS issues

CI 56 SC 56.1 P34 L19 # 2273
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type **E** Comment Status **D**
 Is "1Gb/s", should be "1 Gb/s" (missing space)

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

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1 P34 L19 # 1980
 Dawe, Piers Avago

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

Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Replace "symmetric/asymmetric 10G-EPON" with "symmetric/asymmetric bit rate 10G-EPON".

CI 56 SC 56.1 P34 L19 # 1694
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** Comment Status **D**
 In Subclause 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.

Proposed Response Response Status **W**
 PROPOSED REJECT.
 Basically, this clause only shows differences from CI 56 of IEEE 802.3ay D2.2. So this clause does not have to show Subclause 56.1.1 and Fig.56-1.

CI 56 SC 56.1 P34 L19 # 2418
 DIAB, WAEL BROADCOM

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

Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See #2274

CI 56 SC 56.1 P34 L20 # 1666
 Marris, Arthur Cadence

Comment Type **E** Comment Status **D** See#1576
 Spelling 'Figure'

SuggestedRemedy
 Figure

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1 P34 L20 # 1749
 LANDRY, MATTHEW SILICON LABS

Comment Type **E** Comment Status **D** See#1576
 "Figure" misspelled.

SuggestedRemedy
 Replace "Figure" with "Figure"

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1 P34 L20 # 1576
 Anslow, Peter Nortel Networks

Comment Type **E** Comment Status **D** See#1576
 "Figure 56-4" should be "Figure 56-4"

SuggestedRemedy
 change "Figure 56-4" to "Figure 56-4"

Proposed Response Response Status **W**
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 SC 56.1 P34 L 20 # 2294
 Hajduczenia, Marek Nokia Siemens Networ
 Comment Type E Comment Status D See#1576
 Spelling error. Is "Figiuere", should be "Figure"
 SuggestedRemedy
 Spelling error. Is "Figure", should be "Figure"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1 P34 L 20 # 1993
 Brown, Alan Wave7 Optics, Inc.
 Comment Type E Comment Status D See#1576
 Correctly spell "Figure".
 SuggestedRemedy
 Correctly spell "Figure".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1 P34 L 28 # 1577
 Anslow, Peter Nortel Networks
 Comment Type E Comment Status D
 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 ..."
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 SC 56.1 P34 L 31 # 1981
 Dawe, Piers Avago
 Comment Type T Comment Status D
 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."
 Proposed Response Response Status W
 PROPOSED REJECT.
 The Task Force approved this terminology and presented it to 802.3 WG. Rather than revisit an existing term ("EPON"), it was agreed that this term would be used to refer only to the existing IEEE PONs defined in the 802.3ah project. IEEE PONs defined in 802.3av are jointly referred to as "10G-EPON".

Cl 56 SC 56.1 P34 L 32 # 1578
 Anslow, Peter Nortel Networks
 Comment Type E Comment Status D
 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."
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 **SC 56.1** **P35** **L 2** # 1983
 Dawe, Piers Avago

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

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.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1** **P35** **L 49** # 2274
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type **E** **Comment Status** **D** 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)"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.2** **P38** **L 10** # 1984
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See #1640

Cl 56 **SC 56.1.2** **P38** **L 11** # 1750
 LANDRY, MATTHEW SILICON LABS

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #1640

Cl 56 **SC 56.1.2** **P38** **L 11** # 2015
 Frazier, Howard Broadcom

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

extraneous words "EFM supports a".

SuggestedRemedy
 delete extraneous words "EFM supports a".

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See #1640

Cl 56 SC 56.1.2 P38 L11 # 1640
Anslow, Peter Nortel Networks

Comment Type ER Comment Status D 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;"

Proposed Response Response Status W

PROPOSED ACCEPT.
Moved to c56

Cl 56 SC 56.1.2 P38 L11 # 1802
Flatman, Alan LAN Technologies

Comment Type E Comment Status D See#1640

This sentence does not make sense.

SuggestedRemedy

Improve wording to make sense.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See #1640

Cl 56 SC 56.1.2 P38 L11 # 2422
DIAB, WAEL BROADCOM

Comment Type TR Comment Status D See#1640

1000 Mb1 Gb/s is incorrect

SuggestedRemedy

Change to 1000 Mb/s,

Proposed Response Response Status W

PROPOSED ACCEPT.
See #1640

Cl 56 SC 56.1.2 P38 L12 # 1695
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D See#1640

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See #1640

Cl 56 SC 56.1.2 P38 L12 # 1681
Jessica, Jiang Salira

Comment Type E Comment Status D

typo "1000 Mb1 Gb/s"

SuggestedRemedy

remove "b1"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See #1640

Cl 56 SC 56.1.2 P38 L12 # 2275
Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D 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, "

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See #1640

Cl 56 **SC 56.1.2** **P38** **L 12** # 1762
 KIMURA, Mitsunobu Hitachi Communicatio

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

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

SuggestedRemedy
 "bit rate of 1 Gb/s"

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See #1640

Cl 56 **SC 56.1.2** **P38** **L 14** # 2276
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type E **Comment Status D**

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

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.2** **P38** **L 15** # 2277
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER **Comment Status D** *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@@"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.2** **P38** **L 15** # 1751
 LANDRY, MATTHEW SILICON LABS

Comment Type E **Comment Status D** *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 unpredictable 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2277

Cl 56 **SC 56.1.2** **P38** **L 1617** # 1696
 Lin, Rujian Shanghai Luster Terab

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 See comment #2277

Cl 56 **SC 56.1.2** **P38** **L 17** # 1579
 Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**

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"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 **SC 56.1.2** **P38** **L 20** # 2278
Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 56 **SC 56.1.2** **P38** **L 20** # 1687
Jessica, Jiang Salira

Comment Type **ER** **Comment Status** **D** 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 rephrase the sentence.

SuggestedRemedy

Proposed Response **Response Status** **W**
PROPOSED ACCEPT IN PRINCIPLE.
See #2278

Cl 56 **SC 56.1.2** **P38** **L 21** # 2419
DIAB, WAEL BROADCOM

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

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

Proposed Response **Response Status** **W**
PROPOSED 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** **P38** **L 21** # 1667
Marris, Arthur Cadence

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

Spelling 'an'

SuggestedRemedy
Replace 'an' with 'a'

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 56 **SC 56.1.2** **P38** **L 46** # 2396
Law, David 3Com

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

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.'

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 56 **SC 56.1.2** **P41** **L 14** # 2259
Chalupsky, David Intel Corp.

Comment Type **E** **Comment Status** **D** 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."

Proposed Response **Response Status** **W**
PROPOSED ACCEPT IN PRINCIPLE.
See #1640

Cl 56 SC 56.1.2.1 P38 L 25 # 1641
Anslow, Peter Nortel Networks

Comment Type ER Comment Status D

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 802.3av draft 2.2 had already made this change.

SuggestedRemedy

Remove the word "machines" in strikeout font and show the word "diagrams" in normal font.

Proposed Response Response Status W

PROPOSED ACCEPT.
Moved to c56

Cl 56 SC 56.1.2.1 P38 L 27 # 1697
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

state diagrams,

SuggestedRemedy

state diagrams

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.2.1 P38 L 28 # 2004
Frazier, Howard Broadcom

Comment Type E Comment Status D

"The issues related with coexistence..." s/b "The issues related to coexistence..."

SuggestedRemedy

change as suggested.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.2.1 P38 L 31 # 1698
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

more ONUs

SuggestedRemedy

more Optical Network Units(ONUs)

Proposed Response Response Status W

PROPOSED REJECT.
That is already defined as ONUs. See Line 13 of Page 38.

Cl 56 SC 56.1.2.1 P38 L 32 # 2279
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.2.1 P38 L 38 # 1699
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

XGMII, are

SuggestedRemedy

XGMII are

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.2.2 P38 L 40 # 2280
Hajduczenia, Marek Nokia Siemens Networ

Comment Type T Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 56 SC 56.1.2.2 P38 L 43 # 1700
 Lin, Rujian Shanghai Luster Terab
 Comment Type E Comment Status D See#2005
 the Reconciliation Sublayer(RS) RS for P2P Emulation
 SuggestedRemedy
 RS for P2P Emulation
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Change "(RS) RS for P2P Emulation" to "RS for P2P Emulation"

CI 56 SC 56.1.2.2 P38 L 43 # 2005
 Frazier, Howard Broadcom
 Comment Type E Comment Status D See#2005
 extraneous "RS".
 SuggestedRemedy
 delete
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

CI 56 SC 56.1.2.2 P38 L 48 # 1642
 Anslow, Peter Nortel Networks
 Comment Type ER Comment Status D
 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Moved to c56
 Remove the word "subclause".

CI 56 SC 56.1.3 P39 L 10 # 1994
 Brown, Alan Wave7 Optics, Inc.
 Comment Type E Comment Status D See#1994
 List begins with "c".
 SuggestedRemedy
 Change list to begin with "a".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 1025 # 1701
 Lin, Rujian Shanghai Luster Terab
 Comment Type E Comment Status D See#1994
 c) d) e) f) g) h)
 SuggestedRemedy
 Re-order as a) b) c) d) e) f).
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 12 # 1690
 Joergensen, Thomas Vitesse Semiconducto
 Comment Type T Comment Status D
 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"
 Proposed Response Response Status W
 PROPOSED REJECT.
 The split ratios defined in CI 75 are not maximum. 10G-EPON has to support these values at least. The term "at least" is correct.
 Changed from "E" to "T"

CI 56 SC 56.1.3 P39 L 16 # 2023
 Frazier, Howard Broadcom
 Comment Type **TR** Comment Status **D** See#1702
 "PR10 power budget" s/b "PR30 power budget"
 SuggestedRemedy
 change as suggested
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 16 # 1702
 Lin, Rujian Shanghai Luster Terab
 Comment Type **E** Comment Status **D** 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",
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 16 # 2394
 Law, David 3Com
 Comment Type **T** Comment Status **D** 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 ..'.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 16 # 2000
 Brown, Alan Wave7 Optics, Inc.
 Comment Type **ER** Comment Status **D** See#1702
 Third list item references incorrect power budget.
 SuggestedRemedy
 Correct "PR10 power budget" to "PR30 power budget".
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 19 # 1682
 Jessica, Jiang Salira
 Comment Type **E** Comment Status **D**
 typo "10/1GBASE-PR-U1" should be "10/1GBASE-PRX-U1"
 SuggestedRemedy
 change "10/1GBASE-PR-U1" to "10/1GBASE-PRX-U1"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI 56 SC 56.1.3 P39 L 2 # 1712
 Lin, Rujian Shanghai Luster Terab
 Comment Type **E** Comment Status **D**
 There is no sentence describing Table 56-1
 SuggestedRemedy
 Add one sentence to describe Table 56-1
 Proposed Response Response Status **W**
 PROPOSED REJECT.
 Basically, this clause only shows differences from CI 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.

CI 56 SC 56.1.3 P39 L 22 # 1683
 Jessica, Jiang Salira
 Comment Type **E** Comment Status **D** See#1643
 typo "10/1GBASE-PRX-U1" should be "10/1GBASE-PRX-U2"
 SuggestedRemedy
 change "10/1GBASE-PRX-U1" to "10/1GBASE-PRX-U2"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P39 L22 # 1643
 Anslow, Peter Nortel Networks
 Comment Type ER Comment Status D 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,"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 SC 56.1.3 P39 L22 # 1703
 Lin, Rujian Shanghai Luster Terab
 Comment Type E Comment Status D 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",
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P39 L22 # 2001
 Brown, Alan Wave7 Optics, Inc.
 Comment Type ER Comment Status D See#1643
 Fifth list item references incorrect PMD.
 SuggestedRemedy
 Correct "10/1GBASE-PRX-U1" to "10/1GBASE-PRX-U2".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P39 L25 # 2024
 Frazier, Howard Broadcom
 Comment Type TR Comment Status D
 "PRX10 power budget" s/b "PRX30 power budget"
 SuggestedRemedy
 change as suggested
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P39 L25 # 1704
 Lin, Rujian Shanghai Luster Terab
 Comment Type E Comment Status D
 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",
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P39 L29 # 2393
 Law, David 3Com
 Comment Type T Comment Status D 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:'.

Proposed Response Response Status W
 PROPOSED 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 P39 L5 # 2261
Chalupsky, David Intel Corp.

Comment Type E Comment Status D 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:"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See #2393

Cl 56 SC 56.1.3 P39 L6 # 2281
Hajduczenia, Marek Nokia Siemens Networ

Comment Type T Comment Status D 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@@"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See #2393

Cl 56 SC 56.1.3 P40 L # 2421
DIAB, WAEL BROADCOM

Comment Type TR Comment Status D

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

Proposed Response Response Status W

PROPOSED 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 P40 L1 # 2107
Kramer, Glen Teknovus, Inc.

Comment Type TR Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L23 # 1753
Hirth, Ryan Teknovus

Comment Type E Comment Status D See#1753

The rates for the 10/1GBASE-PRX PHYs are reversed. A "D" type PHY operates at 10Gbps and a "U" type PHY operates at 1Gbps.

SuggestedRemedy

Swap 1000Mb/s with 10Gb/s for PRX-D1 - D3.

Proposed Response Response Status W

PROPOSED 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 transmit 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** **P40** **L 23** # 1705
 Lin, Rujian Shanghai Luster Terab

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.

Cl 56 **SC 56.1.3** **P40** **L 24** # 2392
 Law, David 3Com

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

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Provide tx & rx rate for all dual rate PHYs.

Cl 56 **SC 56.1.3** **P40** **L 25** # 1706
 Lin, Rujian Shanghai Luster Terab

Comment Type **T** **Comment Status** **D** See#1753

10/1GBASE-PRX-U1 ONU 10 Gb/s

SuggestedRemedy
 Correction: 10/1GBASE-PRX-U1 ONU 1000 Mb/s

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.3** **P40** **L 26** # 1707
 Lin, Rujian Shanghai Luster Terab

Comment Type **T** **Comment Status** **D** See#1753

10/1GBASE-PRX-D2 OLT 1000 Mb/s

SuggestedRemedy
 10/1GBASE-PRX-D2 OLT 10 Gb/s

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.3** **P40** **L 28** # 1708
 Lin, Rujian Shanghai Luster Terab

Comment Type **T** **Comment Status** **D** See#1753

10/1GBASE-PRX-U2 ONU 10 Gb/s

SuggestedRemedy
 Correction: 10/1GBASE-PRX-U2 ONU 1000 Mb/s

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #1753

Cl 56 **SC 56.1.3** **P40** **L 29** # 1709
 Lin, Rujian Shanghai Luster Terab

Comment Type **T** **Comment Status** **D** See#1753

10/1GBASE-PRX-D3 OLT 1000 Mb/s

SuggestedRemedy
 Correction: 10/1GBASE-PRX-D3 OLT 10 Gb/s

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #1753

Cl 56 **SC 56.1.3** **P40** **L31** # 2105
 Kramer, Glen Teknovus, Inc.

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Change "10/1GBASE-PRX-U4" to "10/1GBASE-PRX-U3".
 Change "10GBASE-PR-U2" to "10GBASE-PR-U1"

Cl 56 **SC 56.1.3** **P40** **L32** # 1710
 Lin, Rujian Shanghai Luster Terab

Comment Type **T** **Comment Status** **D**
 10/1GBASE-PRX-U4 ONU 10 Gb/s

SuggestedRemedy
 Correction: 10/1GBASE-PRX-U3 ONU 1000 Mb/s

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.3** **P40** **L32** # 1995
 Brown, Alan Wave7 Optics, Inc.

Comment Type **E** **Comment Status** **D** 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".

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Change "10/1GBASE-PRX-U4" to "10/1GBASE-PRX-U3".
 Change "10GBASE-PR-U2" to "10GBASE-PR-U1"

Cl 56 **SC 56.1.3** **P40** **L32** # 1754
 Hirth, Ryan Teknovus

Comment Type **E** **Comment Status** **D**
 10/1GBASE-PRX-U4 should be 10/1GBASE-PRX-U3

SuggestedRemedy
 change "U4" to "U3"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.3** **P40** **L32** # 1684
 Jessica, Jiang Salira

Comment Type **E** **Comment Status** **D** See#2105
 in the column of Name, "10/1GBASE-PRX-U4" does not exist

SuggestedRemedy
 change to "10/1GBASE-PRX-U3"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 56 **SC 56.1.3** **P40** **L32** # 1644
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 **SC 56.1.3** **P40** **L37** # 1985
 Dawe, Piers Avago

Comment Type **T** **Comment Status** **D** See#1645
 10GBASE-PR-U2: does it exist?

SuggestedRemedy
 Delete row? Also problem in Table 56-3.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Change "10GBASE-PR-U2" to "10GBASE-PR-U1"

Cl 56 SC 56.1.3 P40 L38 # 1711
 Lin, Rujian Shanghai Luster Terab

Comment Type T Comment Status D See#1645
 10GBASE-PR-U2 ONU 10 Gb/s

SuggestedRemedy
 Correction: 10GBASE-PR-U1 ONU 10 Gb/s

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L38 # 1685
 Jessica, Jiang Salira

Comment Type E Comment Status D See#1645
 In the name column, "10GBASE-PR-U2" does not exist

SuggestedRemedy
 change to "10GBASE-PR-U1"

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L38 # 1645
 Anslow, Peter Nortel Networks

Comment Type ER Comment Status D
 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"

Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c56

Cl 56 SC 56.1.3 P40 L41 # 1646
 Anslow, Peter Nortel Networks

Comment Type ER Comment Status D 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

Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c56
 See comment #2107

Cl 56 SC 56.1.3 P40 L43 # 2391
 Law, David 3Com

Comment Type T Comment Status D 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.

Proposed Response Response Status W
 PROPOSED ACCEPT.
 See #2107

Cl 56 SC 56.1.3 P40 L46 # 1763
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D See#2006
 "while Table 56-3specifies" needs a space.

SuggestedRemedy
 "while Table 56-3 specifies"

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L46 # 2106
 Kramer, Glen Teknovus, Inc.

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L46 # 1713
 Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

Table 56 specifies.....

SuggestedRemedy

Table 56-2 specifies.....

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L46 # 2282
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type ER Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.
 See #2106

Cl 56 SC 56.1.3 P40 L46 # 1647
 Anslow, Peter Nortel Networks

Comment Type ER Comment Status D

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 ...".

Proposed Response Response Status W

PROPOSED ACCEPT.
 Moved to c56

Cl 56 SC 56.1.3 P40 L47 # 2165
 Bennett, Michael LBNL

Comment Type E Comment Status D

Table 56-3specifies ... needs a space inserted between the "3" and "s"

SuggestedRemedy

replace with the follwing text

Table 56-3 specifies

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P40 L47 # 2006
 Frazier, Howard Broadcom

Comment Type E Comment Status D See#2006

missing space in "Table 56-3specifies".

SuggestedRemedy

insert a space

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P42 L10 # 1756
 Hirth, Ryan Teknovus
 Comment Type E Comment Status D See#2415
 in column 77 "10G-EPN P2MP MPMCS" should read "10G-EPON P2MP MPMC"
 SuggestedRemedy
 change "10G-EPN P2MP MPMCS" to "10G-EPON P2MP MPMC"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P42 L11 # 1996
 Brown, Alan Wave7 Optics, Inc.
 Comment Type E Comment Status D
 Missing comma.
 SuggestedRemedy
 Add comma as in "PMA, FEC".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P42 L15 # 1764
 KIMURA, Mitsunobu Hitachi Communicatio
 Comment Type E Comment Status D See#2006
 "10G-EPN" is not defined abbreviation.
 SuggestedRemedy
 "10G-EPON"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 56 SC 56.1.3 P42 L31 # 1755
 Hirth, Ryan Teknovus
 Comment Type E Comment Status D 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2283

Cl 56 SC 56.1.3 P42 L32 # 1648
 Anslow, Peter Nortel Networks
 Comment Type ER Comment Status D 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"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Moved to c56
 See comment #2283

Cl 56 SC 56.1.3 P42 L32 # 2283
 Hajduczenia, Marek Nokia Siemens Networ
 Comment Type T Comment Status D 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
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Replace Table 56-3 with Table 56-3 of "3av_0809_hajduczenia_3.pdf"

Cl 56 SC 56.1.3 P42 L36 # 1649
 Anslow, Peter Nortel Networks
 Comment Type ER Comment Status D 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"
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Moved to c56
 See comment #2283

Cl 56 **SC 56.1.3** **P42** **L37** # 1650
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Was "ER" changed to "TR"
 Moved to c56
 See comment #2283

Cl 56 **SC 56.1.3** **P42** **L38** # 1686
 Jessica, Jiang Salira

Comment Type **E** **Comment Status** **D** *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 be 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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2283

Cl 56 **SC 56.1.3** **P42** **L39** # 1651
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

Moved to c56
 Changed from "ER" to "TR"
 See comment #2283

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

Cl 56 **SC 56-1** **P35** **L1** # 1806
 D'Ambrosia, John Force10 Networks

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Remove boxes

Cl 56 **SC 56-1** **P36** **L1** # 1807
 D'Ambrosia, John Force10 Networks

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Remove boxes

Cl 56 **SC 56-1** **P37** **L1** # 1808
D'Ambrosia, John Force10 Networks

Comment Type E **Comment Status D**

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.

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
Remove boxes

Cl 56 **SC Table 56-3** **P42** **L** # 2415
DIAB, WAEL BROADCOM

Comment Type E **Comment Status D** See#2415

EPON is not spelled correctly in the last column

SuggestedRemedy

Please fix spelling

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 66 **SC 4.2.1** **P44** **L40** # 2173
Woodward, Ted Telcordia Technologie

Comment Type E **Comment Status D**

first paragraph of 66.4.2.1 appears as though it should be formatted as an editorial remark

SuggestedRemedy

reformat this paragraph

Proposed Response **Response Status W**

PROPOSED REJECT.
Note to the commentator 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** **PNA** **L44** # 2186
Woodward, Ted Telcordia Technologie

Comment Type T **Comment Status D**

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.

Proposed Response **Response Status W**

PROPOSED REJECT.
The P2MP nature of the PON makes the existing RF and LF mechanism somewhat useless. The change for 10GEPON 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** **PNA** **L20** # 2187
Woodward, Ted Telcordia Technologie

Comment Type T **Comment Status D** 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.

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
See response to comment 1663.

Cl 66 **SC 5.4.5** **PNA** **L4** # 2188
Woodward, Ted Telcordia Technologie

Comment Type T **Comment Status D**

There is a table in this section without a table number. Also, the table describes identical bi-directional link behavior 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.

Proposed Response **Response Status W**

PROPOSED REJECT.
PICS does not have table number. Behavior is correct.

Cl 66 SC 66.3.1 P44 L17 # 1668
 Marris, Arthur Cadence
 Comment Type E Comment Status D
 Spelling insertign
 SuggestedRemedy
 inserting
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 66 SC 66.3.1 P44 L18 # 1581
 Anslow, Peter Nortel Networks
 Comment Type E Comment Status D Duplicate 1668
 Editing instruction contains word "insertign" which should be "inserting"
 SuggestedRemedy
 change "insertign" to "inserting"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c66
 See response to comment 1668.

Cl 66 SC 66.4 P44 L21 # 1986
 Dawe, Piers Avago
 Comment Type T Comment Status D
 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!)
 Proposed Response Response Status W
 PROPOSED 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 10 GEPON, too.

Cl 66 SC 66.4.2.1 P44 L31 # 1669
 Marris, Arthur Cadence
 Comment Type T Comment Status D 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See response to comment 1663.

Cl 66 SC 66.4.2.1 P44 L45 # 1582
 Anslow, Peter Nortel Networks
 Comment Type E Comment Status D
 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"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c66

Cl 66 SC 66.4.2.3 P45 L21 # 1670
 Marris, Arthur Cadence
 Comment Type T Comment Status D Duplicate 1663
 b) Idle control characters not under-lined. Remote fault not struck through.
 SuggestedRemedy
 As above
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See response to comment 1663.

Cl 66 SC 66.4.2.3 P45 L21 # 1663
 Anslow, Peter Nortel Networks

Comment Type **TR** Comment Status **D** 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 strikethrough font rather than underline

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 66 SC 66.4.2.3 P45 L21 # 2025
 Frazier, Howard Broadcom

Comment Type **TR** Comment Status **D** Duplicate 1663

The words "Remote Fault Sequence ordered_sets" should appear with strikethroughs.

SuggestedRemedy
 strikethrough the offending words

Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See response to comment 1663.

Cl 66 SC 66.4.2.3 P45 L21 # 1987
 Dawe, Piers Avago

Comment Type **T** Comment Status **D** Duplicate 1663

"RS shall continuously generate Idle control characters Remote Fault Sequence ordered_sets."

SuggestedRemedy
 Which is it? Idles or RF?

Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See response to comment 1663.

Cl 66 SC 66.4.2.3 P45 L27 # 1583
 Anslow, Peter Nortel Networks

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

option c) starts:
 "link_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

Proposed Response Response Status **W**
 PROPOSED ACCEPT.
 Moved to c66

Cl 66 SC 66.5 P45 L42 # 1803
 Flatman, Alan LAN Technologies

Comment Type **E** Comment Status **D** Duplicate 2071

Typo (operaiont)

SuggestedRemedy
 Change to "operation".

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 66 SC 66.5 P45 L42 # 2284
 Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 66 SC 66.5 P45 L 43 # 2007
 Frazier, Howard Broadcom
 Comment Type E Comment Status D Duplicate 2071
 spelling mistake "operaiont" in "Feature" column.
 SuggestedRemedy
 ficks speling.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 66 SC 66.5 P45 L 43 # 2071
 Kramer, Glen Teknovus, Inc.
 Comment Type E Comment Status D Duplicate 2071
 Typos
 "10 Gp/s P2MP operaiont"
 SuggestedRemedy
 Change
 1) Gp/s --> Gb/s
 2) operaiont --> operation
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 66 SC 66.5.3 P45 L 42 # 1584
 Anslow, Peter Nortel Networks
 Comment Type E Comment Status D
 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"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c66

Cl 66 SC 66.5.3 P45 L 42 # 2260
 Chalupsky, David Intel Corp.
 Comment Type E Comment Status D Duplicate 2071
 typo "operaiont"
 SuggestedRemedy
 change to "operation"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 66 SC 66.5.4.5 P46 L 6 # 2285
 Hajduczenia, Marek Nokia Siemens Networ
 Comment Type T Comment Status D
 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
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 67 SC 67 P47 L 19 # 2072
 Kramer, Glen Teknovus, Inc.
 Comment Type E Comment Status D
 grammar
 SuggestedRemedy
 Insert "in" after "and"
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 [Subclause was added]

Cl 67 **SC 67.6.3** **P46** **L15** # 2155
 Remein, Duane Alcatel-Lucent

Comment Type E **Comment Status D**

Format of editing instructions inconsistent with other clauses.

SuggestedRemedy
 Align format with other clauses.

Proposed Response **Response Status W**

PROPOSED REJECT.
 Reference is not consistent with D2.0. Clause 67.6.3 does not exist in D2.0.

Cl 75 **SC 75** **P49** **L1** # 1928
 Dawe, Piers Avago

Comment Type T **Comment Status D**

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.

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
 Change title of C75 to "Physical Medium Dependent (PMD) sublayer and medium for long wavelength 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** **P49** **L1** # 1927
 Dawe, Piers Avago

Comment Type T **Comment Status D**

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

Proposed Response **Response Status W**

PROPOSED 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 75.1** **P49** **L48** # 1587
 Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**

The abbreviation EPON is not in the list of abbreviations

SuggestedRemedy
 Add EPON to the list of abbreviations

Proposed Response **Response Status W**

PROPOSED 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 D**

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.

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 **SC 75.1.1** **P 49** **L 50** # 1765
KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**

"Optical network Unit (ONU)" of "network" shoule be "Network".

SuggestedRemedy

"Optical Network Unit (ONU)"

Proposed Response **Response Status W**

PROPOSED 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 D**

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.

Proposed Response **Response Status W**

PROPOSED 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. The use of individual PMDs depends only on the available power budget and designated, normative reach. It is up to the user of individual PMDs to make sure they are used accordingly. PMDs can be further used correctly without knowing why parameters were selected in this particular manner.

Cl 75 **SC 75.1.4** **P50** **L 30** # 2395
Law, David 3Com

Comment Type **T** **Comment Status** **D** *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 thought 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,'.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

In line 30, replace the text 'PRX-type power budgets are also called asymmetric.' with 'PRX-type power budgets are also called asymmetric data rate.'. (asymmetric data rate) needs to be in italics.

In line 32, replace the text 'PR-type power budgets are also called symmetric.' with 'PR-type power budgets are also called symmetric data rate.'. (symmetric data rate) needs to be in italics.

In line 38, replace "asymmetric, " with "asymmetric data rate, "
In line 40, replace "asymmetric, " with "asymmetric data rate, "
In line 42, replace "asymmetric, " with "asymmetric data rate, "
In line 43, replace "symmetric, " with "symmetric data rate, "
In line 45, replace "symmetric, " with "symmetric data rate, "
In line 47, replace "symmetric, " with "symmetric data rate, "

More changes in all remaining clauses are also pending. In general case, all locations were symmetric / asymmetric PMDs are mentioned, need to be changed into symmetric data rate / asymmetric data rate PMD.

Cl 75 **SC 75.1.4** **P50** **L 37** # 2073
Kramer, Glen Teknovus, Inc.

Comment Type **E** **Comment Status** **D** *bullets in 75.1.4*

Align bullets in the bulleted list

SuggestedRemedy

see above

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.1.4** **P50** **L 38** # 1585
Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
See comment #2073

Cl 75 **SC 75.1.4** **P50** **L 38** # 2286
Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
See comment #2073

Cl 75 **SC 75.1.4** **P50** **L 45** # 1714
Lin, Rujian Shanghai Luster Terab

Comment Type **T** **Comment Status** **D** *PR20 - PX20*

PX10 power budget

SuggestedRemedy

Correction: PX20 power budget

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
[Changed from "E" to "T"]

Cl 75 **SC 75.1.4** **P50** **L 45** # 1586
 Anslow, Peter Nortel Networks

Comment Type **T** **Comment Status** **D** **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;"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

[Changed from "E" to "T"]

See comment #2395

"PR20 - symmetric data rate, medium power budget, compatible with PX20 power budget defined in Clause 60;"

Cl 75 **SC 75.1.4** **P50** **L 45** # 2026
 Frazier, Howard Broadcom

Comment Type **TR** **Comment Status** **D** **PR20 - PX20**

"PX10" s/b "PX20".

SuggestedRemedy

change as suggested in comment.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

See comment #1586

Cl 75 **SC 75.1.4** **P51** **L 16** # 2158
 Effenberger, Frank Huawei Technologies,

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

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** **P51** **L 24** # 2027
 Frazier, Howard Broadcom

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

In the past, minimum reach of 0.5m was used for EPON.

Cl 75 **SC 75.1.4** **P51** **L4** # 2365
 Law, David 3Com

Comment Type E **Comment Status D**
 This is Clause 75.

SuggestedRemedy
 Change the text 'Power budgets defined in Clause 75' to read 'Power budgets'.

Proposed Response **Response Status W**
 PROPOSED REJECT.
 It may not be necessarily immediately clear to someone reading only clause 75. It does not introduce any problems and only additionally specifies what is what.

Cl 75 **SC 75.1.4** **P82** **L1** # 2174
 Woodward, Ted Telcordia Technologie

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

Proposed Response **Response Status W**
 PROPOSED 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** **P80** **L30** # 1660
 Anslow, Peter Nortel Networks

Comment Type T **Comment Status D**

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.

Proposed Response **Response Status W**
 PROPOSED 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.

Re-number the remaining subclauses in 75.10 as necessary. Update all hyperlinks in C75 and remaining Clauses.

Add a new normative reference to C01/1.3 with the following contents "IEC 60825-2, TO BE PROVIDED DURING RESOLUTION PROCESS"

Cl 75 **SC 75.10.3** **P80** **L 44** # 1610
Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**

The second paragraph starts: "Reference @@Annex 67A@@ for additional environmental information." which is unclear.

SuggestedRemedy

Change to "See Annex 67A for additional environmental information."

Proposed Response **Response Status W**

PROPOSED ACCEPT.
Mark external reference as appropriate.

Cl 75 **SC 75.11.1** **P81** **L 22** # 1934
Dawe, Piers Avago

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

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
See comment #1804

Cl 75 **SC 75.11.1** **P81** **L 22** # 1804
Flatman, Alan LAN Technologies

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

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Change the text "Insertion loss measurements of installed fiber cables are made in accordance with ANSI/TIA/EIA-526-7 [B15], method A-1." to read "Insertion loss measurements of installed fiber cables are made in accordance with IEC 61280-4-2:2000".

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"

Changes to 802.3 in general:

Remove "[B15] ANSI/TIA/EIA 526-7-1998, Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant." from 802.3, Annex A. Re-number remaining references as appropriate.

Replace text "ANSI/TIA/EIA-526-7 [B15], method A-1" with "IEC 61280-4-2:2000" in the following subclauses (page numbers consistent with 802.3ayD2.2):

section 3, page 120, line 45
section 4, page 375, line 34
section 4, page 413, line 18
section 5, page 89, line 30
section 5, page 114, line 44
section 5, page 143, line 38

Cl 75 **SC 75.11.2** **P81** **L 29** # 1805
 Coleman, Doug Corning

Comment Type **TR** **Comment Status** **D** **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.'

Proposed Response **Response Status** **W**

PROPOSED 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.D (low water peak SMF) 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.D, 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.D, G.675 SMF"

Cl 75 **SC 75.11.2** **P81** **L 29** # 2164
 Swanson, Steve Corning

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See comment #1805

Cl 75 **SC 75.11.2** **P82** **L 18** # 1657
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

PROPOSED 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** **P82** **L 31** # 1658
 Anslow, Peter Nortel Networks

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

Reference is made to "(G.671 am 1)" but G.671 is not in the references

SuggestedRemedy

Add G.671 to the references

Proposed Response **Response Status** **W**

PROPOSED 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 P82 L35 # 1819
Dudek, Mike JDSU

Comment Type TR Comment Status D

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 absolute maximum chromatic dispersion limit for the fiber connection, and use this maximum chromatic dispersion in the TDP tests.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Currently, chromatic dispersion is accounted for in the power budget via the TDP parameter, calculated for the worst case transmission wavelength in the allocated window (Tx_Wavelength_Min, Tx_Wavelength_Max), based on the dispersion penalty estimation model presented in 3av_0705_saeki_1.pdf. As such, e.g. 60 km link is supported by 10GBASE-PR3 type PMDs as long as the split ratio is limited to 1:2.

This means that as long as the TDP value is observed, distance supported by the given PMD can be increased, as described in the current draft (see also 75.9.2 for the description of the 10G-EPON penalty allocation).

Alter 75.9.2 to read as follows:

"All the receiver types specified in Clause 75 are required to tolerate a path penalty not exceeding 1 dB. Given a fixed set of transmitter and receiver, the optical path penalty is equal to the link margin measured with pure attenuation less the link margin measured with the worst case optical path.

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. The path penalty is a component of transmitter and dispersion penalty (TDP, measured with an ideal transmitter and pure attenuation less the link margin measured with a worst case transmitter and worst case optical path) which is specified in Table 75-5, Table 75-8, Table 75-9 and described in 58.7.9."

Cl 75 SC 75.12 P83 L1 # 2018
Frazier, Howard Broadcom

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.

[Changed from "ER" to "TR"]

See comment #2403 for a new location of "hidden shall" statement.

Add a new row in 75.12.4.5 with the following contents
PRXD1F5 | 10/1GBASE-PRX-D1 receiver damage threshold (coexistence case) | 75.4.2 | Equal to damage threshold of 10GBASE-PR-D1. If the receiver does not meet the damage requirements in Table 75-6 for 10GBASE-PR-D1, then label accordingly | PRD1F5:M | Yes [] N/A []

Add a new row in 75.12.4.6 with the following contents
PRXD2F5 | 10/1GBASE-PRX-D2 receiver damage threshold (coexistence case) | 75.4.2 | Equal to damage threshold of 10GBASE-PR-D2. If the receiver does not meet the damage requirements in Table 75-6 for 10GBASE-PR-D2, then label accordingly | PRD2F5:M | Yes [] N/A []

Add a new row in 75.12.4.7 with the following contents
PRXD3F5 | 10/1GBASE-PRX-D3 receiver damage threshold (coexistence case) | 75.4.2 | Equal to damage threshold of 10GBASE-PR-D3. If the receiver does not meet the damage requirements in Table 75-6 for 10GBASE-PR-D3, then label accordingly | PRD3F5:M | Yes [] N/A []

Cl 75 SC 75.12.4 P86 L2 # 2080
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D

Page break in the middle of the title

SuggestedRemedy

Remove the page break.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 75 **SC 75.12.4.1** **P87** **L 19** # 1611
Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**

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

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 **SC 75.12.4.13** **P92** **L 1** # 1935
Dawe, Piers Avago

Comment Type E **Comment Status D**

Make PICS match clause

SuggestedRemedy

Change title to "Definitions of optical parameters and measurement methods"

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 **SC 75.12.4.13** **P92** **L 6** # 1612
Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**

value/comment "2 m to 5 meters in length" is not consistent.

SuggestedRemedy

change to "2 m to 5 m in length"

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 **SC 75.12.4.15** **P93** **L 23** # 1661
Anslow, Peter Nortel Networks

Comment Type T **Comment Status D**

value/comment is "Conforms to IEC-60950"
IEC-60950 has been superseded by IEC 60950-1.

SuggestedRemedy

change to "Conforms to IEC-60950-1"

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
See comment #1662

Cl 75 **SC 75.12.4.15** **P93** **L 25** # 1662
Anslow, Peter Nortel Networks

Comment Type T **Comment Status D**

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"

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 SC 75.2 P52 L1 # 1810
D'Ambrosia, John Force10 Networks

Comment Type E Comment Status D consistencies versus 802.3ay
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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

- (1) agreed
(2) rejected - it is useful to have reference to particular clauses where description of individual sublayers is located
(3) agreed

Cl 75 SC 75.2 P52 L18 # 2389
Law, David 3Com

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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 P53 L1 # 1811
D'Ambrosia, John Force10 Networks

Comment Type E Comment Status D consistencies versus 802.3ay
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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See comment #1810

Cl 75 SC 75.2 P54 L26 # 2287
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D 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 Subclause 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 Subclause 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.

Proposed Response Response Status W

PROPOSED 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** **P54** **L 27** # 2357
 Law, David 3Com

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

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2287

Cl 75 **SC 75.2.1** **P54** **L 34** # 2359
 Law, David 3Com

Comment Type **E** **Comment Status** **D**
 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 ..'.

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.2.1** **P54** **L 34** # 2358
 Law, David 3Com

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

Proposed Response *Response Status* **W**
 PROPOSED 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 75.2.1.1** **P54** **L 40** # 2074
 Kramer, Glen Teknovus, Inc.

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

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

CI 75 SC 75.3.1 P55 L 30 # 2404
Law, David 3Com

Comment Type TR Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.

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
- (4) Apply the same changes to C60 and C65, since their description is also incorrect i.e. PCS is used instead of PMA.

CI 75 SC 75.3.1.1 P55 L 44 # 1929
Dawe, Piers Avago

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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_quantum and constant receive delay of not more than 4 time_quantum. 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."

CI 75 SC 75.3.1.1 P55 L 45 # 1931
Dawe, Piers Avago

Comment Type T Comment Status D 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 @@.

Proposed Response Response Status W

PROPOSED ACCEPT.

See comment #1929 for resolution.

Cl 75 **SC 75.3.2** **P57** **L21** # 2384
 Law, David 3Com

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

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.

Proposed Response **Response Status** **W**

PROPOSED 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** **P57** **L3** # 1589
 Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** **Test point description**

"TP1 and TP4 and TP5 and TP8" is poor english.

SuggestedRemedy

Change to "TP1, TP4, TP5 and TP8"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 See comment #2175

Cl 75 **SC 75.3.2** **P57** **L3** # 2028
 Frazier, Howard Broadcom

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

Proposed Response **Response Status** **W**

PROPOSED REJECT.
 See comment #2175

Cl 75 **SC 75.3.2** **P57** **L48** # 1590
 Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** **Test point description**

"TP1 - TP4" is ambiguous as to whether it means TP1 through TP4 or not

SuggestedRemedy

Change to "TP1 through TP4"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2175

Cl 75 **SC 75.3.2** **P57** **L7** # 2175
Woodward, Ted Telcordia Technologie

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

Suggested Remedy

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.

Proposed Response **Response Status** **W**

PROPOSED 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 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)."
(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 occurrences 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 PMDs and in Figure 75-4 for 10/1GBASE-PRX PMDs.". Make sure all links are live!

Cl 75 **SC 75.3.5.2** **P59** **L21** # 2362
Law, David 3Com

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

Change the text '.. Clause 75 type PMDs.' to read '.. 10GBASE-PR and 10/1GBASE-PRX type PMDs.'.

Suggested Remedy

See comment.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change text "(.)Clause 75 type PMDs." to read "(.)PMDs defined in Clause 75.".

Cl 75 **SC 75.3.5.2** **P59** **L23** # 2385
Law, David 3Com

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

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.

Suggested Remedy

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.3.5.3** **P59** **L25** **# 1652**
 Anslow, Peter Nortel Networks

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

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"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.3.5.3** **P59** **L45** **# 2387**
 Law, David 3Com

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

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 though 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.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

(1) A set of dual-mode (receiving two data rates in different time slots) PMDs are constructed based on existing PMDs i.e. 10G and 1G PMDs. If we are to fully specify dual-mode PMDs as well, we will need 5/6 more PMDs to support all the required power budgets. I am not sure how it would be accepted by 802.3 in the light of recent discussions on the proliferation of PMD number.

(2) dual-mode PMDs are not required for proper operation of 10G-EPON and it is implementation choice whether such a function needs to be really implemented or not. People argued in favour and against such option, indicating it was much safer to leave it as an option. That is what was done

(3) So as not to confuse dual-rate (10 DS., 1G US) and dual-mode (coexistence with EPON) operation, two new terms are introduced in #2406. They should allow for simple identification of what is what. Dual-rate will be exclusively used to refer to 10/1GBASE-PRX PMDs, with 10G DS. and 1G US. Coexistence will be referred to as dual-mode.

Cl 75 **SC 75.4.1** **P61** **L30** # 1591
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 See also comment #1594

Cl 75 **SC 75.4.1** **P61** **L5** # 1715
 Lin, Rujian Shanghai Luster Terab

Comment Type E **Comment Status D**
 Shaded area indecates compliant part.

SuggestedRemedy
 Correction: Shaded area indecates the compliant part.

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Change to "Shaded area indicates the compliant part".

Cl 75 **SC 75.4.2** **P61** **L40** # 1592
 Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**
 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,..."

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.4.2** **P61** **L43** # 2011
 Frazier, Howard Broadcom

Comment Type E **Comment Status D**
 Need a couple more definite articles in this paragraph. Insert the word "The" before "Damage threshold" in two places.

SuggestedRemedy
 as per comment.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.4.2** **P62** **L13** # 2029
 Frazier, Howard Broadcom

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

Proposed Response **Response Status W**
 PROPOSED 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.
 @@Topic needs reconfirmation from TF@@

Cl 75 **SC 75.5** **P64** **L6** # 2289
 Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 **SC 75.5** **P64** **L7** # 1767
 KIMURA, Mitsunobu Hitachi Communicatio

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

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

[Subclause number was fixed]

See comment #2289

Cl 75 **SC 75.5** **P68** **L18** # 1768
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**

Comment "c" doesn't have a period (".").

SuggestedRemedy

A period is needed.

Proposed Response **Response Status W**

PROPOSED ACCEPT.

[Subclause number was fixed]

Cl 75 **SC 75.5.1** **P64** **L23** # 1593
 Anslow, Peter Nortel Networks

Comment Type E **Comment Status D**

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 ..."

Proposed Response **Response Status W**

PROPOSED 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, respectivel, per measurement techniques described in Subclause 75.9.8."

Make sure all links are live!

Cl 75 **SC 75.5.1** **P64** **L53** # 1664
 Anslow, Peter Nortel Networks

Comment Type TR **Comment Status D** *Table 75-8 Footnote C*

Table 75-8 Note C states "If a laser source has a lower TDP, the minimum transmitter launch OMA (OM_{Amin}) and average minimum launch power (AVP_{min}) 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 (OM_{Amin}) and average minimum launch power (AVP_{min}) may be relaxed by the amount 3.0 - TDP."

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 75 SC 75.5.1 P64 L 53 # 181523
Hamano, Hiroshi Fujitsu Labs.

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See comment #1669.

== 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 P65 L 33 # 1596
Anslow, Peter Nortel Networks

Comment Type E Comment Status D

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

Proposed Response Response Status W

PROPOSED 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 P65 L 33 # 1595
Anslow, Peter Nortel Networks

Comment Type E Comment Status D

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."

Proposed Response Response Status W

PROPOSED ACCEPT.
Make sure it gets implemented together with comment #1596.

Cl 75 SC 75.5.1 P65 L 5 # 1716
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

Shaded area indecates compliant part.

SuggestedRemedy

Correction: Shaded area indecates the compliant part.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Shaded area indicates the compliant part.
See comment #1715

Cl 75 **SC 75.5.1** **P66** **L14** # 181526
 Hamano, Hiroshi Fujitsu Labs.

Comment Type E **Comment Status D**
 In Figure 75-6, relaxed power level indication suffix seems incorrect in "Apostrophe" placement.

SuggestedRemedy
 Change "AVP 'min" to "AVP' min".

Proposed Response **Response Status W**
 PROPOSED 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** **P66** **L9** # 1800
 Hamano, Hiroshi Fujitsu Labs.

Comment Type E **Comment Status D**
 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.5.2** **P66** **L24** # 1594
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 See also comment #1591.

Cl 75 **SC 75.5.2** **P67** **L46** # 2030
 Frazier, Howard Broadcom

Comment Type TR **Comment Status D** *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).

Proposed Response **Response Status W**
 PROPOSED REJECT.
 See comment #2029 for rationale
 @@Topic needs reconfirmation from TF@@

Cl 75 **SC 75.6** **P69** **L10** # 2176
 Woodward, Ted Telcordia Technologie

Comment Type T **Comment Status D**
 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

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 [changed from "E" to "T"]
 [Page number was added]
 See comment #1805

Cl 75 **SC 75.6** **P69** **L27** # 1769
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**
 Comment "a" doesn't have a period (".").

SuggestedRemedy
 A period is needed.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 [Subclause number was fixed]

Cl 75 SC 75.6 P69 L29 # 2166
Bennett, Michael LBNL

Comment Type E Comment Status D

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

Proposed Response Response Status W

PROPOSED ACCEPT.

[Subclause number was fixed]

Cl 75 SC 75.6 P69 L30 # 1717
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

...in a typical ODN, numerous ODN implementation practices may result is

SuggestedRemedy

Correction:...in a typical ODN. Numerous ODN implementation practices may result in

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 75 SC 75.6 P69 L32 # 1597
Anslow, Peter Nortel Networks

Comment Type E Comment Status D 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-

Proposed Response Response Status W

PROPOSED ACCEPT.

Combine with comment #1598.

Cl 75 SC 75.6 P70 L15 # 1799
Hamano, Hiroshi Fujitsu Labs.

Comment Type E Comment Status D

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.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 75 SC 75.6 P70 L20 # 1770
KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D

Comment "a" doesn't have a period (".").

SuggestedRemedy

A period is needed.

Proposed Response Response Status W

PROPOSED ACCEPT.

[Subclause number was fixed]

Cl 75 SC 75.6 P70 L23 # 2167
Bennett, Michael LBNL

Comment Type E Comment Status D

Footnote d "is" should be "in" and "users'" should be "user's"

SuggestedRemedy

replace "is" with "in" and "users'" with "user's"

Proposed Response Response Status W

PROPOSED ACCEPT.

[Subclause number was fixed]

See also comment #2166

Cl 75 **SC 75.6** **P70** **L 23** # 1718
 Lin, Rujian Shanghai Luster Terab

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

...in a typical ODN, numerous ODN implementation practices may result is

SuggestedRemedy
 Correction:...in a typical ODN. Numerous ODN implementation practices may result in

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 See comment #1717

Cl 75 **SC 75.6** **P70** **L 25** # 1598
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 See comment #1597
 Combine with comment #1597.

Cl 75 **SC 75.6.1** **P70** **L 40** # 2291
 Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 See comment #181525

Cl 75 **SC 75.6.1** **P70** **L 40** # 181525
 Hamano, Hiroshi Fujitsu Labs.

Comment Type **E** **Comment Status** **D** *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".

Proposed Response **Response Status** **W**

PROPOSED 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** **P71** **L 19** # 181530
 Hamano, Hiroshi Fujitsu Labs.

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

Proposed Response **Response Status** **W**

PROPOSED 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** **P70** **L 44** # 1653
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #181525

Cl 75 **SC 75.6.1.1** **P70** **L 47** # 2388
 Law, David 3Com

Comment Type **T** **Comment Status** **D** *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.'

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #181525

Cl 75 **SC 75.6.1.1** **P70** **L 49** # 2168
 Bennett, Michael LBNL

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

sub-sets should not be hyphenated

SuggestedRemedy
 replace sub-sets with subsets

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 [Subclause number was fixed]
 [Page number was added]

Cl 75 **SC 75.6.1.1** **P70** **L 51** # 2373
 Law, David 3Com

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.

List of suggested changes
 (1) Create informative Annex 75A, with the following contents:
 - 75A.1 - Illustrative channel insertion loss and penalties for PMDs defined in Clause 75 (contents - Table 75-13 and Table 75-12)
 - 75A.2 - Wavelength allocation for PMDs defined in Clause 75, suggested 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" will remain in its original location. Annex 75B does not cover downstream channel for coexistence of 1G and 10G EPONs on the same plant.
 (2) Create informative Annex 75B, with the following contents:
 Dual-rate operation (move here subclause 75.7 as a whole)
 (3) Create informative Annex 75C, with the following contents:
 Jitter at TP1-TP8 for PMDs defined in Clause 75 (move here subclause 75.8 as a whole)

Cl 75 **SC 75.6.1.1** **P71** **L 1** # 2290
 Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 3av_0809_hajduczenia_4.pdf is referred to.

Cl 75 **SC 75.6.1.1** **P71** **L1** # 2075
 Kramer, Glen Teknovus, Inc.

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2290

Cl 75 **SC 75.6.1.2** **P71** **L34** # 1654
 Anslow, Peter Nortel Networks

Comment Type **ER** **Comment Status** **D** - 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"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 See comment #2292

Cl 75 **SC 75.6.1.2** **P71** **L34** # 2292
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type **T** **Comment Status** **D** - 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.

Proposed Response **Response Status** **W**
 PROPOSED 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** **P71** **L36** # 2031
 Frazier, Howard Broadcom

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 See comment #2373.

CI 75 SC 75.6.1.2 P71 L37 # 2406
Law, David 3Com

Comment Type TR Comment Status D joint, Informative Annexes

It is very confusing to use the term 'dual-rate' operation to mean something other than 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).

Suggested Remedy

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 implementation 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'.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Implement together with #2373 and #2347.

- (1) Align the use of term "channel" by introducing the following changes:
- page 70, line 46: change "Therefore, there are two distinct downstream channel ranges," to "Therefore, there are two distinct downstream wavelength bands,"
 - page 70, lines 51 - 53: change "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." to "An OLT supporting both downstream wavelength bands may multiplex the output of the two transmitters using a WDM coupler, while an ONU selects the relevant downstream wavelength band using an optical filter."
 - page 71, line 33-34: change "thus WDM channel multiplexing cannot be used to separate the two data channels" to "thus WDM multiplexing cannot be used to separate the two data wavelength bands"
 - page 71, line 37: change "An OLT supporting both upstream channels must use TDMA" to "An OLT supporting both upstream wavelength bands must use TDMA"
 - page 71, line 43: change "supports a single upstream channel" to "supports a single upstream wavelength band"
 - page 71, line 45: change "if the OLT supports both 1 Gb/s and 10 Gb/s upstream channels," to "if the OLT supports both 1 Gb/s and 10 Gb/s upstream wavelength bands,"
 - page 72, Figure 75-9: change "From upstream PON channel" to "Upstream PON wavelength band" (twice)

- page 72, line 27: change "it is possible to design each PMD channel specifically" to "it is possible to design each PMD signal path specifically"
- page 72, line 52: change "both data rate channels" to "both signal paths"

(2) introduce two new definitions into C01/1.4, formatting them appropriately:
"dual-mode" When referring to PON PMDs, a mode of operation in which a PMD is capable of receiving two different data rates in different time slots, resulting from coexistence of EPON and 10G-EPON on the same PON plant.
"dual-rate" When referring to PON PMDs, a mode of operation in which a PMD is transmitting data at different rate than receiving data e.g. 10/1GBASE-PRX-D transmitting at 10 Gb/s and receiving at 1 Gb/s.
Change all occurrences of the term "dual-rate"/"dual rate" to "dual-mode". The term "dual-mode" can be used in description of 10/1GBASE-PRX type PMDs to further emphasize their description and asymmetric characteristics.

(3) Change 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 implementation information related to an OLT supporting both upstream wavelength bands, see 75.7.". Make sure all links are live.

CI 75 SC 75.7 P71 L41 # 2032
Frazier, Howard Broadcom

Comment Type TR Comment Status D Annexes, Hidden shall in 75.7

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 labeled "informative", so this requirement should be moved to a normative subclause.

Suggested Remedy

Delete the subclause and move the damage threshold requirement to a normative subclause.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See comment #2373, implement together with #2402 and #2403

Cl 75 **SC 75.7** **P71** **L 42** # 2402
 Law, David 3Com

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #2373. Implement #2373 together with changes suggested in this comment. Update all cross references as necessary. Subclause 77.4 will be moved to Annex 75B.

Cl 75 **SC 75.7** **P71** **L 46** # 2347
 Law, David 3Com

Comment Type **E** **Comment Status** **D** **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.'

Proposed Response **Response Status** **W**

PROPOSED 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 shared medium networks, e.g. Passive Optical Networks (PON) based on tree-and-branch architecture. TDMA allows multiple users to share the same frequency channel by transmitting their data in associated time slots, effectively switching from one transmitter to another."

Cl 75 **SC 75.7** **P71** **L 50** # 2348
 Law, David 3Com

Comment Type **E** **Comment Status** **D** **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 ..'

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Implement together with comment #2373

CI 75 SC 75.7 P72 L 4 # 2368
Law, David 3Com

Comment Type ER Comment Status D native Annexes, TIA acronym

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'.

Proposed Response Response Status W

PROPOSED ACCEPT.
Implement together with comment #2373

CI 75 SC 75.7 P72 L 44 # 2367
Law, David 3Com

Comment Type ER Comment Status D Annexes, Implementation choices

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 ..'.

Proposed Response Response Status W

PROPOSED 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):"
Implement together with comment #2373

CI 75 SC 75.7 P72 L 45 # 2177
Woodward, Ted Telcordia Technologie

Comment Type E Comment Status D Annexes, 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:'

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
[Page number was added]
[Subclause number was fixed]
See coment #2367
Implement together with comment #2373

CI 75 SC 75.7 P72 L 46 # 2349
Law, David 3Com

Comment Type E Comment Status D 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 ..'.

Proposed Response Response Status W

PROPOSED ACCEPT.
Implement together with comment #2373

CI 75 SC 75.7 P72 L 5 # 1655
Anslow, Peter Nortel Networks

Comment Type ER Comment Status D native Annexes, TIA acronym

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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment #2368.
Implement together with comment #2373

Cl 75 **SC 75.7** **P73** **L 3** # 2350
 Law, David 3Com

Comment Type **E** **Comment Status** **D** **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.'

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Implement together with comment #2373

Cl 75 **SC 75.7** **P73** **L 33** # 2369
 Law, David 3Com

Comment Type **ER** **Comment Status** **D** **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:'.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Implement together with comment #2373

Cl 75 **SC 75.7** **P73** **L 41** # 2377
 Law, David 3Com

Comment Type **T** **Comment Status** **D** **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.'

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Implement together with comment #2373

Cl 75 **SC 75.7** **P73** **L 46** # 2351
 Law, David 3Com

Comment Type **E** **Comment Status** **D** **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.'

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Implement together with comment #2373

Cl 75 **SC 75.7** **P73** **L 50** # 1599
 Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** **Annexes, 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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2403
 1 Gb/s Rx could be used in this case also to receive 10 Gb/s with the associated power levels and might get damaged if higher power levels of 10 Gb/s signal are not within acceptable limits. (see e.g. the system where the signal is split in electrical domain and a single optical Rx unit is used for both data rates).
 Implement together with comment #2373

Cl 75 **SC 75.7** **P73** **L 50** # 2403
Law, David 3Com

Comment Type **TR** **Comment Status** **D** *Annexes, Hidden shall in 75.7*

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
Text will be moved to a location before Table 75-6.
Implement together with comment #2373

Cl 75 **SC 75.8** **P74** **L 1** # 2370
Law, David 3Com

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Implement together with comment #2373

Cl 75 **SC 75.8** **P74** **L 1** # 2293
Hajduczenia, Marek Nokia Siemens Networ

Comment Type **E** **Comment Status** **D** *as, 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 = 'Äi20 dB/d" with "Slope = -20 dB/d"

SuggestedRemedy

Replace "Slope = 'Äi20 dB/d" with "Slope = -20 dB/d" in Figures 75-11 and 75-12.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.8** **P74** **L 12** # 1798
Hamano, Hiroshi Fujitsu Labs.

Comment Type **E** **Comment Status** **D** *as, 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'.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
See comment #2293

Cl 75 **SC 75.8** **P74** **L 12** # 2353
Law, David 3Com

Comment Type **E** **Comment Status** **D** *as, 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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
See comment #2293

Cl 75 SC 75.8 P74 L 12 # 2076
 Kramer, Glen Teknovus, Inc.
Comment Type E Comment Status D *es, Labels in 75-11 and 75-12*
 Corrupted labels in Figures 75-11 and 75-12
SuggestedRemedy
 Correct font
Proposed Response Response Status W
 PROPOSED ACCEPT.
 See comment #2293

Cl 75 SC 75.8 P74 L 12 # 1600
 Anslow, Peter Nortel Networks
Comment Type E Comment Status D *es, 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"
Proposed Response Response Status W
 PROPOSED ACCEPT.
 See comment #2293

Cl 75 SC 75.8 P74 L 13 # 2002
 Brown, Alan Wave7 Optics, Inc.
Comment Type ER Comment Status D *es, Labels in 75-11 and 75-12*
 Garbage characters describe slope in Figure 75-11.
SuggestedRemedy
 Correct the figure.
Proposed Response Response Status W
 PROPOSED ACCEPT.
 See comment #2293

Cl 75 SC 75.8 P74 L 25 # 2003
 Brown, Alan Wave7 Optics, Inc.
Comment Type ER Comment Status D *es, Labels in 75-11 and 75-12*
 Garbage characters describe slope in Figure 75-12.
SuggestedRemedy
 Correct the figure.
Proposed Response Response Status W
 PROPOSED ACCEPT.
 See comment #2293

Cl 75 SC 75.8 P74 L 34 # 1759
 Hirth, Ryan Teknovus
Comment Type T Comment Status D *es, Clause 75.8 jitter issues*
 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"
Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2077
 Tables in subclause 75.8 cannot be updated at this point since was no feedback from the ad-hoc.

Cl 75 SC 75.8 P74 L 35 # 2190
 Woodward, Ted Telcordia Technologie
Comment Type T Comment Status D *es, Clause 75.8 jitter issues*
 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
 Clarify 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.
Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 [Subclause number was fixed]
 [Page number was fixed]
 See comment #2077

Cl 75 **SC 75.8** **P74** **L37** # 1719
 Lin, Rujian Shanghai Luster Terab

Comment Type **TR** **Comment Status** **D** *ixes, Clause 75.8 jitter issues*
 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.

Proposed Response **Response Status** **W**
 PROPOSED 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** **P74** **L4** # 2352
 Law, David 3Com

Comment Type **E** **Comment Status** **D** *ixes, 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 ..'.

Proposed Response **Response Status** **W**
 PROPOSED 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** **P74** **L47** # 2077
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** *ixes, Clause 75.8 jitter issues*
 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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Implement into comment #1719

Cl 75 **SC 75.8** **P74** **L48** # 2371
 Law, David 3Com

Comment Type **ER** **Comment Status** **D** *ixes, 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.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2077 for Table 75-15 and Table 75-14. See comment #2078 for Table 75-16.

CI 75 **SC 75.8** **P74** **L 48** # |1601|
 Anslow, Peter Nortel Networks

Comment Type **T** **Comment Status** **D** *ixes, 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"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 [Changed from "E" to "T"]
 See comment #2077

CI 75 **SC 75.8** **P74** **L 9** # |2178|
 Woodward, Ted Telcordia Technologie

Comment Type **E** **Comment Status** **D** *ixes, 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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 [Subclause number was fixed]
 [Page number was fixed]

CI 75 **SC 75.8** **P75** **L 1** # |1760|
 Hirth, Ryan Teknovus

Comment Type **T** **Comment Status** **D** *ixes, Clause 75.8 jitter issues*

The upstream jitter budgets should be updated with the results from the jitter adhoc.

SuggestedRemedy
 update table 75-15. Remove note "These are preliminary jitter values based on simulations @BER10-12 and need to be finalized."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 See comment #2077

CI 75 **SC 75.8** **P75** **L 35** # |2078|
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** *ixes, 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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 Implement into comment #1719

CI 75 **SC 75.8** **P75** **L 36** # |1602|
 Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** *ixes, 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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2078

CI 75 **SC 75.9** **P76** **L 10** # |2378|
 Law, David 3Com

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

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 ..'.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Change the offending text to read "When measuring jitter at TP1 and TP5, it is (.)"

Cl 75 **SC 75.9** **P76** **L 11** # 2354
 Law, David 3Com

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

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 ..'.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.9** **P76** **L 12** # 2355
 Law, David 3Com

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

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 ..'.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.9.1** **P76** **L 20** # 1932
 Dawe, Piers Avago

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

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

?

Proposed Response **Response Status** **W**

PROPOSED 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 predictor models cannot be restricted in this draft.

Cl 75 **SC 75.9.1** **P76** **L 21** # 1656
 Anslow, Peter Nortel Networks

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

Reference is made to G.650.1 which is not in the references section

SuggestedRemedy

Add a reference to G.650.1

Proposed Response **Response Status** **W**

PROPOSED 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** **P79** **L 36** # 1720
 Lin, Rujian Shanghai Luster Terab

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

Receiver sensitivity is defined for the random pattern test frame, or.....

SuggestedRemedy

Correction: Receiver sensitivity is defined using the random pattern test frame, or.....

Proposed Response **Response Status** **W**

PROPOSED REJECT.
 Original sentence reads well.

Cl 75 **SC 75.9.11** **P79** **L 39** # 1608
 Anslow, Peter Nortel Networks

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

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."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.9.12** **P79** **L 44** # 2191
Woodward, Ted Telcordia Technologie

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.

[Subclause number was fixed]

[Page number was fixed]

The text "If stressed receiver compliance is necessary, the receiver shall meet the specified bit error ratio at the power" will be changed to "The receiver shall meet the specified bit error ratio at the power"

Cl 75 **SC 75.9.12** **P79** **L 45** # 1609
Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** **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,"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

See also comment #2191

Cl 75 **SC 75.9.15** **P80** **L 11** # 1721
Lin, Rujian Shanghai Luster Terab

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

value is

SuggestedRemedy

Correction: its value is

Proposed Response **Response Status** **W**

[Line number was fixed]

Lines number 11, 13 and 18 are affected.

Cl 75 **SC 75.9.15** **P80** **L 15** # 2179
Woodward, Ted Telcordia Technologie

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

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.

Proposed Response **Response Status** **W**

PROPOSED REJECT.

[Subclause number was fixed]

[Page number was fixed]

It is not really clear what is suggested in this comment. Seek clarification from the author or reject altogether.

Cl 75 **SC 75.9.15** **P80** **L 15** # 2361
Law, David 3Com

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Tcdr will be used, where "cdr" is subscripted.

Cl 75 **SC 75.9.15** **P80** **L 15** # 1722
Lin, Rujian Shanghai Luster Terab

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

value

SuggestedRemedy

Correction: its value is

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

See comment #1721

Cl 75 **SC 75.9.15** **P80** **L 16** # 1723
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** **Comment Status** **D**
 value is less than...

SuggestedRemedy
 Correction: with a value less than...

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 See comment #1721

Cl 75 **SC 75.9.2** **P76** **L 23** # 1771
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type **E** **Comment Status** **D**
 In the title of 75.9.2, "10G EPON PMDs" should be "10G-EPON PMDs".

SuggestedRemedy
 "10G-EPON PMDs"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 [Subclause number was fixed]

Cl 75 **SC 75.9.2** **P76** **L 25** # 2356
 Law, David 3Com

Comment Type **E** **Comment Status** **D**
 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 ..'.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.9.2** **P76** **L 27** # 1659
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 In out power budget spreadsheet, TDP != optical path penalty. These are defined as independent values.

TDP = Transmitter and Dispersion Penalty (maximum) is equal to the link margin, measured with an ideal Tx and pure attenuation less the link margin measured with a worst case Tx and worst case optical path.

Optical path penalty = The penalty attributable to the optical path. Given a fixed set of transmitter and receiver, the optical path penalty is equal to the link margin measured with pure attenuation less the link margin measured with the worst case optical path.

Cl 75 **SC 75.9.2** **P76** **L 27** # 2379
 Law, David 3Com

Comment Type **T** **Comment Status** **D**
 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 ..'.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.9.2** **P76** **L31** # 1772
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**
 "Table 75-5, Table75-8, Table75-9" needs "and".

SuggestedRemedy
 "Table 75-5, Table75-8, and Table75-9"

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 [Subclause number was fixed]
 "Table 75-5, Table 75-8, and Table 75-9"

Cl 75 **SC 75.9.3** **P76** **L35** # 2380
 Law, David 3Com

Comment Type T **Comment Status D**
 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.

Proposed Response **Response Status W**
 PROPOSED 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 75.9.3** **P76** **L35** # 2372
 Law, David 3Com

Comment Type ER **Comment Status D**
 Compliance is to be achieved by 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.'

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 75 **SC 75.9.4** **P76** **L43** # 1933
 Dawe, Piers Avago

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

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.

(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".

(3) Make the following changes using appropriate editorial instructions

1.4 Definitions
 Change 1.4.311 as follows:
 1.4.311 RMS spectral width: A measure of the optical wavelength range as defined by <remove>ANSI/EIA/</remove>TIA 455-127<add>-A</add><remove>-1991</remove> (FOTP-127<add>-A</add>) [B8].

Annex A
 Change B8 as follows, and place in its alphanumeric position:
 [B8] <remove>ANSI/EIA/</remove>TIA 455-127<add>-A</add><remove>-1991</remove><add>-2006</add> (FOTP-127<add>-A</add>), Basic Spectral Characterization of <remove>Multimode</remove> Laser<remove>s</remove> <add>Diodes</add>.

38.6.1 Center wavelength and spectral width measurements
 Change 38.6.1 as follows:
 The center wavelength and spectral width (RMS) shall be <add>within the limits given in Table 38-3 or Table 38-7 if</add> measured using <add>the method given in</add><remove> an optical spectrum analyzer per ANSI/EIA/</remove>TIA-455-127<remove>-1991</remove><add>-A</add> [B8].

52.9.2 Center wavelength and spectral width measurements
 Change 52.9.2 as follows:
 The center wavelength and spectral width (RMS) shall be<add> within the limits given in Table 52-7 , Table 52-12 or Table 52-16 if</add> measured using<add> the method given in</add><remove> an optical spectrum analyzer per</remove> TIA<remove>/EIA/</remove>455-127<add>-A</add> under modulated conditions using an appropriate PRBS or a valid 10GBASE-R or 10GBASE-W signal, OC-192 signal, STM-64

signal, or another representative test pattern.

58.7.2 Wavelength and spectral width measurements

Change 58.7.2 as follows:

The wavelength and spectral width (RMS) shall meet specifications according to <remove>ANSI/EIA/</remove>TIA-455-127<add>-A</add>, under modulated conditions using a valid 100BASE-X signal.

59.7.2 Wavelength and spectral width measurements

Change 59.7.2 as follows:

The wavelength and spectral width (RMS) shall meet the specifications according to <remove>ANSI/EIA/</remove>TIA-455-127<add>-A</add>, under modulated conditions using a valid 100BASE-X signal.

60.7.2 Wavelength and spectral width measurements

Change 60.7.2 as follows:

The wavelength and spectral width (RMS) shall meet specifications according to <remove>ANSI/EIA/</remove>TIA-455-127<add>-A</add>, under modulated conditions using a valid 100BASE-X signal.

Cl 75 **SC 75.9.4** **P76** **L 43** # 1603

Anslow, Peter

Nortel Networks

Comment Type **E** **Comment Status** **D** **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 ..."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
See comment #1933

Cl 75 **SC 75.9.4** **P76** **L 49** # 1604

Anslow, Peter

Nortel Networks

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
[Changed from "E" to "T"]

Cl 75 **SC 75.9.6** **P77** **L 35** # 1605

Anslow, Peter

Nortel Networks

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

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 ..."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 75 **SC 75.9.7** **P77** **L 43** # 1606

Anslow, Peter

Nortel Networks

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

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."

Proposed Response **Response Status** **W**

PROPOSED 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** **P78** **L 24** # 2079

Kramer, Glen

Teknovus, Inc.

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

Proposed Response **Response Status** **W**

PROPOSED 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 P78 L3 # 1607
 Anslow, Peter Nortel Networks

Comment Type E Comment Status D 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."

Proposed Response Response Status W

PROPOSED 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 P99 L27 # 1774
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

Titles of Figure 76-3 and 76-4 have periods (".").

SuggestedRemedy

The periods should be removed.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See resolution to comment 1773

Cl 76 SC 1.6.1.5 P102 L39 # 1776
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

A period is missed.

SuggestedRemedy

A period should be placed.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 2.2.1.5 P110 L39 # 1777
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D 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".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 2.2.4.1 P113 L29 # 1778
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

Font of "P(x)" is not proper.

SuggestedRemedy

Font of "P(x)" should be the same one as of the equation after "vector".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 2.2.5 P116 L19 # 1779
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

Two periods are shown.

SuggestedRemedy

A period should be removed.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 2.2.5 P117 L46 # 1780
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

Two spaces are shown between "by two".

SuggestedRemedy

A space should be removed.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 2.2.5.1 P118 L41 # 1781
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

The last word of the sentence "A 66-bit ..." is "transmissino" and has no period.

SuggestedRemedy
 Should be "transmission."

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 2.3.4.4 P134 L51 # 1782
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

The first word of the sentence is "TThe".

SuggestedRemedy
 Should be "The".

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 2.3.7.1 P136 L24 # 1783
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

Between the words "Subclause" and "76.2.2.1.1", there is no space.

SuggestedRemedy
 Should be "Subclause 76.2.2.1.1."

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 3 P137 L29 # 1784
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

"100BASEPX" is shown. A hyphen should be placed between BASE and PX.

SuggestedRemedy
 Should be "1000BASE-PX".

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 4.3 P141 L27 # 1785
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

In the "Item" cell, "FECEncoder" is shown. A hyphen should be placed between FEC and Encoder.

SuggestedRemedy
 Should be "FEC-Encoder".

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 4.4.7 P144 L1 # 1786
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E Comment Status D typo

In the title of 76.4.4.7, "state machines" is shown.

SuggestedRemedy
 Should be "state diagrams".

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76 P95 L1 # 1936
 Dawe, Piers Avago

Comment Type T Comment Status D

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"

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Change to:
 Reconciliation Sublayer, Physical Coding Sublayer with FEC, and Physical Media Attachment for 10G-EPON.

Cl 76 **SC 76** **P95** **L 1** # 2308
Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Use "Reconciliation Sublayer"

Cl 76 **SC 76** **P95** **L 30** # 1937
Dawe, Piers Avago

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

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.

Proposed Response **Response Status** **W**

PROPOSED 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** **P95** **L 37** # 1938
Dawe, Piers Avago

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

"76.1 Reconciliation Sublayer (RS)": need a more specific title, as there are many RSs

SuggestedRemedy

76.1 Reconciliation Sublayer (RS) for 10G-EPON

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1** **P96** **L 1** # 1812
D'Ambrosia, John Force10 Networks

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Keep clause numbers, remove boxes.

Cl 76 **SC 76.1** **P97** **L 1** # 1813
D'Ambrosia, John Force10 Networks

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment 1812

Cl 76 **SC 76.1.1** **P95** **L 40** # 2012
Frazier, Howard Broadcom

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

Decapitalize "Subclause".

SuggestedRemedy

per comment.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 SC 76.1.1 P95 L41 # 2081
 Kramer, Glen Teknovus, Inc.
 Comment Type E Comment Status D
 grammar
 Sentence uses "at one data rate" and "in another data rate"
 SuggestedRemedy
 Replace "in" with "at"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.1.1 P95 L42 # 1724
 Lin, Rujian Shanghai Luster Terab
 Comment Type E Comment Status D
 receive in...
 SuggestedRemedy
 Correction: receiving at
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.1.1 P96 L15 # 2150
 Lynskey, Eric Teknovus
 Comment Type E Comment Status D
 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.1.1 P96 L45 # 2149
 Lynskey, Eric Teknovus
 Comment Type E Comment Status D
 In Figure 76-1, the label incorrectly includes Clause 75. The PMD is not highlighted in the figure.
 SuggestedRemedy
 Remove "Clause 75".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.1.1 P96 L45 # 2180
 Woodward, Ted Telcordia Technologie
 Comment Type E Comment Status D 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
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.1.1 P96 L45 # 2019
 Frazier, Howard Broadcom
 Comment Type ER Comment Status D DupTxdp96
 in Figure 76-1, "Clause 76Clause75" should be "Clause 76".
 SuggestedRemedy
 Delete extraneous "Clause 75".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.1.2 P98 L3 # 1613
 Anslow, Peter Nortel Networks
 Comment Type E Comment Status D 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 ..."
 Proposed Response Response Status W
 PROPOSED ACCEPT.
 Moved to c76

Cl 76 **SC 76.1.2** **P98** **L 3** # 2020
 Frazier, Howard Broadcom

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Replace "interface used to bridge between"
 with "interface used to transfer data between"

Cl 76 **SC 76.1.2.3** **P98** **L 37** # 2304
 Hajduczenia, Marek Nokia Siemens Networ

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.2.3** **P98** **L 39** # 2082
 Kramer, Glen Teknovus, Inc.

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.2.3** **P98** **L 39** # 2192
 Woodward, Ted Telcordia Technologie

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

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

Proposed Response **Response Status** **W**

PROPOSED 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** **P99** **L 1820** # 1725
 Lin, Rujian Shanghai Luster Terab

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.2.3** **P99** **L 31** # 2013
 Frazier, Howard Broadcom

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.2.3** **P99** **L31** # 2305
 Hajduczenia, Marek Nokia Siemens Networ

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

There are funny characters in Figure 76-4 in MAC name. It says currently "1G,ÄiMAC" or "10G,ÄiMAC" whereas it should say "1G-MAC" or "10G-MAC", respectively.

SuggestedRemedy
 Change "1G,ÄiMAC" and "10G,ÄiMAC" to "1G-MAC" and "10G-MAC", respectively, in Figure 76-4.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.1.2.3** **P99** **L32** # 181546
 Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**
 PROPOSED 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** **P99** **L52** # 2083
 Kramer, Glen Teknovus, Inc.

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

Primitive name is not correct

SuggestedRemedy
 PLS.DATA should be PLS_DATA

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.1.3** **P100** **L10** # 2084
 Kramer, Glen Teknovus, Inc.

Comment Type **ER** **Comment Status** **D** *dupTtxtp100*

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 connect 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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 The Editor shall replace the indicated text as he does not know how to "Perlace"

Cl 76 **SC 76.1.3** **P100** **L15** # 2366
 Law, David 3Com

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

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.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution from comment 2084.

Cl 76 **SC 76.1.3** **P100** **L 24** # 2397
Law, David 3Com

Comment Type T **Comment Status D**

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 believe that it is a burst of packets that are sent by ONUs to the OLT.

Page 109, line 39: Chnage '.. that precede the first frame in the burst.' to read '.. that precede 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

Proposed Response **Response Status W**
PROPOSED ACCEPT.

Cl 76 **SC 76.1.3.1** **P100** **L 30** # 2085
Kramer, Glen Teknovus, Inc.

Comment Type E **Comment Status D**

grammar

SuggestedRemedy

Insert commans after the "chip-to-chip" and "independence"

Proposed Response **Response Status W**
PROPOSED ACCEPT.

Cl 76 **SC 76.1.3.1** **P100** **L 32** # 2306
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E **Comment Status D**

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.

Proposed Response **Response Status W**
PROPOSED ACCEPT.

Cl 76 **SC 76.1.3.2** **P100** **L 37** # 2086
Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D**

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."

Proposed Response **Response Status W**
PROPOSED ACCEPT.

Cl 76 **SC 76.1.3.2** **P100** **L 39** # 1939

Dawe, Piers Avago

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

"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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.3.2** **P100** **L 39** # 2021

Frazier, Howard Broadcom

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.3.2** **P100** **L 39** # 1614

Anslow, Peter Nortel Networks

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.6** **P101** **L 0** # 2307

Hajduczenia, Marek Nokia Siemens Networ

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

Table 76-1 and Table 76-2 are affected. There are unusually 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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Will beat on frame

Cl 76 **SC 76.1.6** **P101** **L 12** # 1615

Anslow, Peter Nortel Networks

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

Table 76-1 uses the term "Legacy (Tx: 1 Gb/s)" which suggests that 1G EPON is out of date.

SuggestedRemedy

change both occurrences of "Legacy (Tx: 1 Gb/s)" to "EPON (Tx: 1 Gb/s)""

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
Moved to c76

Cl 76 **SC 76.1.6** **P101** **L 28** # 1616

Anslow, Peter Nortel Networks

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

Table 76-2 uses the term "Legacy (Rx: 1 Gb/s)" which suggests that 1G EPON is out of date.

SuggestedRemedy

change both occurrences of "Legacy (Rx: 1 Gb/s)" to "EPON (Rx: 1 Gb/s)""

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
Moved to c76

Cl 76 **SC 76.1.6** **P101** **L3** # 1775
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**

A period is missed.

SuggestedRemedy
 A period should be placed.

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.6** **P101** **L30** # 1726
 Lin, Rujian Shanghai Luster Terab

Comment Type T **Comment Status D**

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

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.6.1** **P101** **L36** # 2413
 Mandin, Jeff PMC Sierra

Comment Type TR **Comment Status D**

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

Proposed Response **Response Status W**

PROPOSED REJECT.
 consensus of the TF up to this point has been to use the PLS_CARRIER.Indication as described in the draft.

In anticipation of
 TF Vote
 Reject:
 Accept:
 Accept in Principle (see 3av_0809_tbd.pdf):

Cl 76 SC 76.1.6.1.2 P101 L47 # 2398
Law, David 3Com

Comment Type T Comment Status D

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 ..'.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 76.1.6.1.3 P101 L6 # 2181
Woodward, Ted Telcordia Technologie

Comment Type E Comment Status D typo

repeated word '...bound the the XGMII'

SuggestedRemedy

Substitute 'to' for duplicate word

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 76.1.6.1.3 P102 L5 # 2087
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D

Use consistent primitive naming

SuggestedRemedy

use PLS_CARRIER.indication (lower case "i")

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 76.1.6.1.4 P101 L12 # 2309
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D

"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 subtract the following value from its value. The notation += after a counter indicates it is to add the following value to its value."

Proposed Response Response Status W

PROPOSED 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 P101 L15 # 2310
Hajduczenia, Marek Nokia Siemens Networ

Comment Type T Comment Status D

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.

Proposed Response Response Status W

PROPOSED 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 bytes (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 bytes (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 bytes (the size of the XGMII transfer column)."

Cl 76 SC 76.1.6.1.6 P103 L30 # 1752
LANDRY, MATTHEW SILICON LABS

Comment Type T Comment Status D

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.

Proposed Response Response Status W

PROPOSED REJECT.

Changed from "E" to "T"

usage is consistent with IEEE Style Manual.

Cl 76 SC 76.1.6.1.6 P103 L30 # 2256
Ganga, Ilango Intel

Comment Type ER Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

"else" to be replaced with "ELSE"

Could (at TF description) replace pseudo code in UPDATE with the following:

"increment tx_cnt

If tx_cnt is equal to block_size then add the parity_ratio to parity_cnt and set tx_cnt to zero"

Cl 76 **SC 76.1.6.2.1** **P104** **L 10** # 2119

Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.6.2.2** **P104** **L 24** # 2375

Law, David 3Com

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Moved to c01
Add to abbreviations

Cl 76 **SC 76.1.6.2.3.2** **P105** **L 26** # 2120

Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.1.6.2.3.2** **P105** **L 37** # 2311

Hajduczenia, Marek Nokia Siemens Networ

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2** **P105** **L** # 1940

Dawe, Piers Avago

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

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).

Proposed Response **Response Status** **W**

PROPOSED REJECT.
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.

Cl 76 **SC 76.2** **P105** **L 1** # 2193

Woodward, Ted Telcordia Technologie

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
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 equivalent 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** **P106** **L 26** # 2151
Lynskey, Eric Teknovus

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

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".

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2.1.2** **P107** **L 20** # 1617
Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
Moved to c76

Cl 76 **SC 76.2.1.2** **P107** **L 24** # 1941
Dawe, Piers Avago

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Remove "(rate increase)" and "(rate decrease)"

Cl 76 **SC 76.2.2** **P107** **L 47** # 2312
Hajduczenia, Marek Nokia Siemens Networ

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

"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."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Use upstream to be consistent with other directional references:
Change to:
"For both 10GBASE-PR and 10/1GBASE-PRX, the ONU PCS always operates in a burst mode in upstream direction."

Cl 76 **SC 76.2.2** **P107** **L 49** # 1618
Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
Moved to c76

Cl 76 **SC 76.2.2** **P107** **L 49** # 2088
 Kramer, Glen Teknovus, Inc.

Comment Type **E** **Comment Status** **D** *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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2** **P108** **L 14** # 1619
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Moved to c76

Cl 76 **SC 76.2.2.1** **P108** **L 38** # 2313
 Hajduczenia, Marek Nokia Siemens Networ

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

Why is IDLE DELETION process capitilized ? Idle Insertion or Carrier Sense was not ...

SuggestedRemedy
 Change "IDLE DELETION" to "Idle Deletion" in all occurences.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.1** **P108** **L 49** # 1620
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Moved to c76

Cl 76 **SC 76.2.2.1** **P108** **L 49** # 2089
 Kramer, Glen Teknovus, Inc.

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

typo

SuggestedRemedy
 "specific" should be "specified"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.1** **P108** **L 52** # 2090
 Kramer, Glen Teknovus, Inc.

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

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 SC 76.2.2.1.2 P109 L39 # 2400
Law, David 3Com

Comment Type T Comment Status D
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.

Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
Time frame is stated as "expressed in 66-bit blocks"

Change last sentence of definition from:
"This variable is used only by the ONU."
to:
"This variable is used only by the ONU and is implementation specific."

Cl 76 SC 76.2.2.1.4 P110 L24 # 181547
Lynskey, Eric Teknovus

Comment Type E Comment Status D resubmit
Typo in definition for DelCount.

SuggestedRemedy
Replace "than" with "that".

Proposed Response Response Status W
PROPOSED ACCEPT.
== Resolution from Denver 0806 Meeting ==
REJECT.

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

Resubmit

=====

Cl 76 SC 76.2.2.1.5 P110 L36 # 2118
Lynskey, Eric Teknovus

Comment Type T Comment Status D
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.

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 76 SC 76.2.2.1.5 P110 L37 # 1621
Anslow, Peter Nortel Networks

Comment Type E Comment Status D 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."

Proposed Response Response Status W
PROPOSED ACCEPT.
Moved to c76

Cl 76 SC 76.2.2.1.5 P110 L39 # 2014
Frazier, Howard Broadcom

Comment Type E Comment Status D typo
extra full stop at the end of the sentence.

SuggestedRemedy
delete a full stop.

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 76 SC 76.2.2.1.5 P110 L39 # 2091
 Kramer, Glen Teknovus, Inc.
 Comment Type E Comment Status D typo
 extra period at the end of the paragraph
 SuggestedRemedy
 see comment
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.2.2.1.5 P110 L39 # 2314
 Hajduczenia, Marek Nokia Siemens Networ
 Comment Type E Comment Status D 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.."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.2.2.1.5 P111 L1 # 2331
 Hajduczenia, Marek Nokia Siemens Networ
 Comment Type T Comment Status D
 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2341

Cl 76 SC 76.2.2.1.5 P111 L1 # 2341
 Hajduczenia, Marek Nokia Siemens Networ
 Comment Type T Comment Status D
 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Per last bullet on slide 6 of "initialize DelCount with FEC_Psize" modify state diagrams accordingly (assuming this fix is verified).

Cl 76 SC 76.2.2.1.5 P111 L15 # 2414
Mandin, Jeff PMC Sierra

Comment Type TR Comment Status D

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"
```

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 76.2.2.1.5 P111 L16 # 181551
Lynskey, Eric Teknovus

Comment Type E Comment Status D resubmit, ELSE

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.

Proposed Response Response Status W

PROPOSED ACCEPT.
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.

=====

Cl 76 **SC 76.2.2.1.5** **P112** **L16** # 2399
 Law, David 3Com

Comment Type T **Comment Status D**

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.

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

Option 3:

Open c21 add an 'IF', 'THEN', 'ELSE' construct to 21.5 that can be used within state boxes.

Cl 76 **SC 76.2.2.3** **P130** **L46** # 1625
 Anslow, Peter Nortel Networks

Comment Type E **Comment Status D** *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."

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Moved to c76

Cl 76 **SC 76.2.2.4** **P113** **L7** # 1943
 Dawe, Piers Avago

Comment Type T **Comment Status D**

Hiding the light under a bushel

SuggestedRemedy

Refer to 76A

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

Add to end of subclause:

"Annex 76A give an example of RS(255,223) FEC Frame Encoding."

Cl 76 **SC 76.2.2.4** **P113** **L8** # 2194
 Woodward, Ted Telcordia Technologie

Comment Type T **Comment Status D**

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 an 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)

Proposed Response **Response Status W**

PROPOSED REJECT.

The standard is designed to define a single PON standard for world wide use in the access network. Proprietary extensions to the fundamental characteristics of the standard should be discouraged.

Cl 76 SC 76.2.2.4.1 P113 L12 # 1945
 Dawe, Piers Avago
 Comment Type T Comment Status D
 "Galois Field"?
 SuggestedRemedy
 Explain, give reference, or tell your story without mention of it.
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Strike everthing in sentence after "the Reed-Solomon code (255,223)" and add reference.
 See resolution of comment 1944

Cl 76 SC 76.2.2.4.1 P113 L12 # 1946
 Dawe, Piers Avago
 Comment Type T Comment Status D
 "non-binary"? Does this mean anything, here?
 SuggestedRemedy
 Delete?
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.2.2.4.1 P113 L12 # 1944
 Dawe, Piers Avago
 Comment Type T Comment Status D
 Please give a reference for a more complete discussion of RS(255, 223). Is G.975 relevant?
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Editor needs input from TF -
 G.975 does not explicitly describe RS(255,223) any other reference?

Cl 76 SC 76.2.2.4.1 P113 L13 # 2092
 Kramer, Glen Teknovus, Inc.
 Comment Type E Comment Status D reword
 grammar
 SuggestedRemedy
 replace the hyphen with a comma in
 "The code is systematic - meaning..."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.2.2.4.1 P113 L17 # 2376
 Law, David 3Com
 Comment Type ER Comment Status D 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 76 SC 76.2.2.4.1 P113 L17 # 1948
 Dawe, Piers Avago
 Comment Type TR Comment Status D FEC_Formula
 Explain what x is - or avoid this kind of language
 SuggestedRemedy
 Per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Define "x" after where.
 X is equal to ...
 Editor request input from the Task Force

Cl 76 **SC 76.2.2.4.1** **P113** **L17** # 1947
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.4.1** **P113** **L21** # 1950
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 Editor needs input from TF

Cl 76 **SC 76.2.2.4.1** **P113** **L21** # 1949
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 Editor needs input from TF to confirm polynomial.

Cl 76 **SC 76.2.2.4.1** **P113** **L23** # 1952
 Dawe, Piers Avago

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

If this equation is any more than window dressing, give it an equation number

SuggestedRemedy
 Per comment

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.4.1** **P113** **L23** # 1951
 Dawe, Piers Avago

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

Explain what L is

SuggestedRemedy
 Per comment

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Add (under "where:")
 L(x) is equal to
 Editor requests input from TF

Cl 76 **SC 76.2.2.4.1** **P113** **L32** # 1953
 Dawe, Piers Avago

Comment Type **TR** **Comment Status** **D** **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 than 16), add PICS

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Add to 76.2.3.3 at end of 1st para:
 "Implementations shall be capable of correcting up to sixteen symbols and detecting errors of up to TBD symbols."

Cl 76 **SC 76.2.2.4.1** **P113** **L32** # 1954
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 1953

Cl 76 **SC 76.2.2.4.2** **P114** **L40** # 2316
Hajduczenia, Marek Nokia Siemens Networ

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

Proposed Response **Response Status** **W**
PROPOSED ACCEPT IN PRINCIPLE.
padding bits to the twenty-seven 65-bit blocks

Cl 76 **SC 76.2.2.4.2** **P114** **L41** # 1959
Dawe, Piers Avago

Comment Type **TR** **Comment Status** **D**
"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.

Proposed Response **Response Status** **W**
PROPOSED REJECT.
Editor needs textual input from TF to close this comment with anything other than reject.

Cl 76 **SC 76.2.2.4.2** **P115** **L27** # 1623
Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** *typo*
Figure 76-13 contains the text "29 ,Au padding" which does not seem correct

SuggestedRemedy
should this be "29 "0" padding"?

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.
Moved to c76

Cl 76 **SC 76.2.2.4.2** **P115** **L27** # 2096
Kramer, Glen Teknovus, Inc.

Comment Type **E** **Comment Status** **D**
Corrupted text in Figure 76-13 in box "padding"
Same in Figure 76-20.

SuggestedRemedy
restore to the original text

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.4.3** **P116** **L1** # 1961
Dawe, Piers Avago

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

SuggestedRemedy
Formatting

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.4.3** **P116** **L5** # 1960
Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
PROPOSED ACCEPT IN PRINCIPLE.
To figure 76-13
add:
"transmitted first"
below tx_data-group<0> (PMA)

add:
"transmitted last"
below tx_data-group<15> (PMA)

TF to confirm

Cl 76 **SC 76.2.2.4.3** **P116** **L 8** # 2317
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E **Comment Status D**

"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."

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
"the twenty-seven 66-bit "

Cl 76 **SC 76.2.2.5** **P116** **L 12** # 2195
Woodward, Ted Telcordia Technologie

Comment Type T **Comment Status D**

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

Proposed Response **Response Status W**

PROPOSED REJECT.
The minimum and maximum burst length are determined by the MPCP protocol (c64) not the PHY.

Cl 76 **SC 76.2.2.5** **P117** **L 24** # 2124
Lynskey, Eric Teknovus

Comment Type T **Comment Status D**

Figure 76-15 does not show the end of burst delimiter.

SuggestedRemedy

Add end of burst delimiter to figure.

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.5** **P117** **L 24** # 2157
Remein, Duane Alcatel-Lucent

Comment Type T **Comment Status D** 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)"

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.5** **P117** **L 28** # 2318
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E **Comment Status D**

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"

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.5** **P117** **L 42** # 2093
Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D** 0x55

Synch pattern is not 0x55 anymore

SuggestedRemedy

1) remove text "0x55 (transmission bit sequence 1010...)"
2) remove "(0x55...)" in Figure 76-15

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment 2157

Cl 76 SC 76.2.2.5 P118 L1 # 2320
Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR Comment Status D 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"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 76 SC 76.2.2.5 P118 L1 # 2198
Hirano, Kengo NEC Corporation

Comment Type T Comment Status D EOB

The ONU burst transmission ends with a burst terminator pattern of 3 blocks of all zeroes (see Figure 76-16).

SuggestedRemedy

SuggestedRemedy:

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment 2320

Cl 76 SC 76.2.2.5 P118 L1 # 1671
Feng, Dongning Huawei Technologies

Comment Type T Comment Status D 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."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See resolution to comment 2320

Cl 76 SC 76.2.2.5 P118 L12 # 2153
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Changed from "E" to "T"
use "END_BURST_DELIMITER"
See resolution to comment 2320

Cl 76 SC 76.2.2.5 P118 L2 # 2319
Hajduczenia, Marek Nokia Siemens Networ

Comment Type E Comment Status D

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.

Proposed Response Response Status W

PROPOSED REJECT.
Figures and text will move around a lot before the final edition.

Cl 76 SC 76.2.2.5 P118 L21 # 1727
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D

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,

Proposed Response Response Status W

PROPOSED REJECT.
I beliee 76-14 is correct.

Cl 76 **SC 76.2.2.5** **P118** **L 24** # 1965
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 These subclauses were removed from previous drafts.

Cl 76 **SC 76.2.2.5** **P118** **L 24** # 1963
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 These subclauses were removed from previous drafts.

Cl 76 **SC 76.2.2.5** **P118** **L 25** # 1964
 Dawe, Piers Avago

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

SuggestedRemedy
 subclause

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.5.1** **P118** **L 31** # 2409
 Mandin, Jeff PMC Sierra

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Rationalize with comment 2156

Cl 76 **SC 76.2.2.5.1** **P118** **L 33** # 2156
 Remein, Duane Alcatel-Lucent

Comment Type **T** **Comment Status** **D** **ProvSyncPat**
 BURST_DELIMITER and SP are currently defined as a constants. The value of these constants is optimized 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 communication of these variables to ONU in Discovery Gate.
 Add new registers to c45

see presentation 3av_0809_remein_1.pdf (frame file is available).

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Rationalize with comment 2409

Cl 76 **SC 76.2.2.5.2** **P119** **L 35** # 2095
 Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D**
 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."

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.2.5.3** **P120** **L 1** # 1962
 Dawe, Piers Avago

Comment Type TR **Comment Status D**
 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

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Change psuedo code to the following (in MS Visual Basic, a proگرامing language available to any MS Excel user):
 Sub RemoveFifoHead()
 ' shift FIFO_DD forward
 Dim FIFO_DD() As Byte
 Dim FifoSize As Integer
 '
 tmpCnt = 0
 Do While tmpCnt < FifoSize
 FIFO_DD(tmpCnt) = FIFO_DD(tmpCnt + 1)
 tmpCnt = tmpCnt + 1
 Loop
 FifoSize = FifoSize - 1
 End Sub

Editor to develop similar examples for 76.2.3.1.3, 76.2.3.3.3

Cl 76 **SC 76.2.2.6** **P123** **L 12** # 2298
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR **Comment Status D**
 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)"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.25** **P117** **L 24** # 1673
 Tajima, Akio NEC Corporation

Comment Type T **Comment Status D** 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".

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Changed from "E" to ""T
 Remove specific reference to value.
 See resolution to comment 2157

Cl 76 SC 76.2.3 P124 L 6 # 2322
Hajduczenia, Marek Nokia Siemens Networ

Comment Type T Comment Status D
"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."

Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
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 P124 L 15 # 2130
Lynskey, Eric Teknovus

Comment Type T Comment Status D
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...".

Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 76 SC 76.2.3.1.3 P125 L 41 # 181549
Lynskey, Eric Teknovus

Comment Type E Comment Status D resubmit
Confusing notation here. We should use the special symbols and operators found on page 10.

SuggestedRemedy
Replace "<>" with "not equal to" symbol.

Proposed Response Response Status W
PROPOSED 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
=====

Cl 76 SC 76.2.3.1.3 P125 L 50 # 2412
Mandin, Jeff PMC Sierra

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

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.

Proposed Response Response Status **W**

PROPOSED REJECT.

To be accepted pending a proper and correct proposed solution.

Cl 76 SC 76.2.3.1.4 P127 L 1 # 2410
Mandin, Jeff PMC Sierra

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

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 synchronization state diagram that has been fixed to not use BlockFromGearbox().

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

The comment author is encourage to provide an illustration and/or description of the modified state diagram.

Cl 76 SC 76.2.3.1.4 P127 L 3 # 2109
Lynskey, Eric Teknovus

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

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[]

Proposed Response Response Status **W**

PROPOSED ACCEPT.
Changed from "E" to "T"

Cl 76 **SC 76.2.3.3** **P130** **L 36** # 2401
 Law, David 3Com

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

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 ..'.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.3** **P130** **L 36** # 2325
 Hajduczenia, Marek Nokia Siemens Networ

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

"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"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 "correctness of the twenty seven 66-bit blocks"

Cl 76 **SC 76.2.3.3** **P130** **L 46** # 1728
 Lin, Rujian Shanghai Luster Terab

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

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.3** **P130** **L 50** # 1968
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 1953
 add PICS statement

Cl 76 **SC 76.2.3.3** **P131** **L 53** # 1626
 Anslow, Peter Nortel Networks

Comment Type **E** **Comment Status** **D** *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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Moved to c76

Cl 76 **SC 76.2.3.3** **P131** **L 53** # 2097
 Kramer, Glen Teknovus, Inc.

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

Unconventional notation {SH.0, SH.1}

SuggestedRemedy
 Use SH<1:0> or sync_header<1:0>

Same is on page 143, line 45

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.3.3** **P133** **L 9** # 181550
 Lynskey, Eric Teknovus

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

Pseudo-code could be made easier to read.

SuggestedRemedy
 Start "else" branch on new line.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 == Resolution from Denver 0806 Meeting ==
 REJECT.

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

=====

Cl 76 **SC 76.2.3.3.4** **P133** **L 20** # 1967
 Dawe, Piers Avago

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

"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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.3.4** **P133** **L 20** # 1966
 Dawe, Piers Avago

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

Have some paragraphs got lost or mis-ordered? We have The body of this Subclause... here and on the next page.

SuggestedRemedy
 Per comment

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Remove duplicate text.

Cl 76 **SC 76.2.3.3.4** **P133** **L 27** # 2111
 Lynskey, Eric Teknovus

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

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[]

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 Chnaged from "E" to "T"

Cl 76 **SC 76.2.3.3.4** **P133** **L 30** # 2098
 Kramer, Glen Teknovus, Inc.

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

State diagram in Figure 76-22 is missing transition "BEGIN"

SuggestedRemedy
 Add this tranition into INIT state

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.4** **P133** **L 51** # 2183
 Woodward, Ted Telcordia Technologie

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

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.

Proposed Response **Response Status** **W**

PROPOSED 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** **P133** **L 54** # 1627
 Anslow, Peter Nortel Networks

Comment Type E **Comment Status D** 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 Moved to c76

Cl 76 **SC 76.2.3.4.4** **P134** **L 51** # 1729
 Lin, Rujian Shanghai Luster Terab

Comment Type E **Comment Status D** typo

TThe BER Monitor

SuggestedRemedy
 Correction: The BER Monitor

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.7** **P136** **L 8** # 1730
 Lin, Rujian Shanghai Luster Terab

Comment Type E **Comment Status D** typo

in the same locations

SuggestedRemedy
 Correction: at the same locations

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.7.1** **P136** **L 17** # 2099
 Kramer, Glen Teknovus, Inc.

Comment Type TR **Comment Status D**

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)

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 Skip explanation.

Cl 76 **SC 76.2.3.7.1** **P136** **L 24** # 2326
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type E **Comment Status D** 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"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.7.2** **P136** **L 26** # 2034
 Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D**
 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

Proposed Response **Response Status W**
 PROPOSED ACCEPT IN PRINCIPLE.
 (modeled after CLK definition on pg 119)

RX_CLK
 TYPE: boolean
 This boolean is true on every negative edge of RX_CLK (See @@Subclause 46.3.2.1@@) and represents instances of time at which a 66-bit block should be passed from the Idle Insertion block to the XGMII interface. This variable is reset to false upon read.

Cl 76 **SC 76.2.3.7.2** **P136** **L 31** # 2100
 Kramer, Glen Teknovus, Inc.

Comment Type TR **Comment Status D**
 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 // 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 // characters. FIFO_II is a zero-based array of size FIFO_II_SIZE (See 76.2.3.7.1)."

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.7.2** **P136** **L 53** # 2033
 Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D**
 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.2.3.7.5** **P137** **L 21** # 2133
 Lyskey, Eric Teknovus

Comment Type T **Comment Status D**
 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[]

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 24** # 2382
 Law, David 3Com

Comment Type T **Comment Status D**
 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'.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 28** # 2383
 Law, David 3Com

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

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.'

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 .. And 1000BASE-PX defined in Subclause @@65.3.2@@, as shown in Table 76-5.

Cl 76 **SC 76.3** **P137** **L 28** # 2327
 Hajduczenia, Marek Nokia Siemens Networ

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

Incorrect PMD name. There is no 1000BASEPX PMD. Change to "1000BASE-PX"

SuggestedRemedy
 Change "1000BASEPX" to "1000BASE-PX"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 29** # 2035
 Kramer, Glen Teknovus, Inc.

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

Typo

SuggestedRemedy
 1000BASEPX should be 1000BASE-PX

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 29** # 1731
 Lin, Rujian Shanghai Luster Terab

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

1000BASEPX

SuggestedRemedy
 Correction: 1000BASE-PX

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 39** # 2360
 Law, David 3Com

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

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.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 40** # 2381
 Law, David 3Com

Comment Type **T** **Comment Status** **D** *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'.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 40** # 2300
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type **T** **Comment Status** **D** *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".

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.3** **P137** **L 40** # 2036
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** *table 76-5 r3*

Wrong PMA name in table 76-5, on line 40

SuggestedRemedy
 10GBASE-PR-U should be 10GBASE-PR-D

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 3rd row of table (not including headers)

Cl 76 **SC 76.3.1.1** **P137** **L 52** # 2037
 Kramer, Glen Teknovus, Inc.

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

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.3.1.1** **P138** **L 42** # 2328
 Hajduczenia, Marek Nokia Siemens Networ

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.3.2** **P139** **L 11** # 2386
 Law, David 3Com

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

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, ..',

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.3.2** **P139** **L 20** # 2405
 Law, David 3Com

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 Annex 76B (or 75A?)

Cl 76 **SC 76.3.2.1** **P139** **L 16** # 2038
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** *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."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76 **SC 76.3.2.1.1** **P139** **L 20** # 2039
 Kramer, Glen Teknovus, Inc.

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

SuggestedRemedy
 "tests" should be "test"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 And setup should be setups.

Cl 76 **SC 76.3.2.1.1** **P139** **L 20** # 1628
 Anslow, Peter Nortel Networks

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

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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 [Moved to C76]
 [Clause and subclause number was added]

Cl 76 **SC 76.3.2.1.1** **P139** **L 20** # 2363
 Law, David 3Com

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

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 ...'.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2039

Cl 76 **SC 76.3.2.1.1** **P139** **L 33** # 2184
 Woodward, Ted Telcordia Technologie

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

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.

Proposed Response **Response Status** **W**
 PROPOSED 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** **P140** **L 1** # 2040
 Kramer, Glen Teknovus, Inc.

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

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"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Gladly

Cl 76 **SC 76.4.2.2** **P141** **L 5** # 2042
 Kramer, Glen Teknovus, Inc.

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

Incorrect clause name

SuggestedRemedy
 "point-to-point" should be "point-to-multipoint"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.3** **P141** **L 26** # 2113
 Lynskey, Eric Teknovus

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

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.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Changed from "E" to "T"

Cl 76 **SC 76.4.3** **P141** **L 27** # 1969
 Dawe, Piers Avago

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

76.1.2.4

SuggestedRemedy
 76.2.2.4

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Also see comment 2113

Cl 76 **SC 76.4.3** **P141** **L 27** # 2041
 Kramer, Glen Teknovus, Inc.

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

Inconsistent item names

*FECEncoder and *FEC-Decoder

SuggestedRemedy
 Either use hyphen or not in both cases

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 See resolution to comment 2113

Cl 76 **SC 76.4.3** **P141** **L 29** # 1970
 Dawe, Piers Avago

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

76.2.3.2

SuggestedRemedy
 76.2.3.3

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Also see comment 2113

Cl 76 **SC 76.4.4.2** **P142** **L 6** # 2147
 Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 PICS would be more complete if we included inherited items and fixed the references.

Cl 76 **SC 76.4.4.3** **P142** **L 20** # 2127
 Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2147
 (the editor likes the single cross reference idea)

Cl 76 **SC 76.4.4.4** **P143** **L 12** # 2108
 Lynskey, Eric Teknovus

Comment Type E **Comment Status D**
 Reference in item DD2 is incorrect.

SuggestedRemedy
 Replace with 76.2.2.5.4.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.4** **P143** **L 14** # 2129
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D**
 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[]

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.5** **P143** **L 21** # 2044
 Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D**
 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."

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.5** **P143** **L 22** # 2128
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D**
 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.5** **P143** **L27** # 2043
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D**
 Incorrect function name (in two places)

SuggestedRemedy
 "Idle Detection" should be 'Idle Deletion"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.6** **P143** **L38** # 2134
 Lynskey, Eric Teknovus

Comment Type **T** **Comment Status** **D** *FEC intro*
 I cannot find the shall statement associated with PICS item FE1.

SuggestedRemedy
 Add a shall or remove item FE1.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Move subclause 76.2.2.4.1 FEC Algorithm (RS(255, 223)) to new subclause 76.2.1.3 (Overview)
 Change subclause title to:
 "FEC Algorithm for 10G-EPON"
 Introduce new subclause with sentence:
 "The PCS shall use a Reed-Solomon code (255, 223) Algorithm for FEC encoding/decoding in any direction operating at 10 Gb/s."

Cl 76 **SC 76.4.4.6** **P143** **L41** # 2112
 Lynskey, Eric Teknovus

Comment Type **E** **Comment Status** **D**
 Subclause reference is incorrect for PICS item FE2.

SuggestedRemedy
 Replace with 76.2.3.3.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.7** **P144** **L5** # 2132
 Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.7** **P144** **L5** # 2045
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** *FEC PICS*
 Missing clause number for item SM1

SuggestedRemedy
 Use 76.2.2.4

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to 2132 & 2134

Cl 76 **SC 76.4.4.7** **P144** **L7** # 2110
 Lynskey, Eric Teknovus

Comment Type **E** **Comment Status** **D**
 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[]

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 76 **SC 76.4.4.9** **P144** **L 27** # 2126
 Lynskey, Eric Teknovus

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

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Replace subclause with 76.3.1.3.2. Reword value/comment to refer to TBD time_quantum instead of 16-bit times.
 (achievable delay variation is still in question).

Cl 76 **SC 76.4.4.9** **P144** **L 27** # 2046
 Kramer, Glen Teknovus, Inc.

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

Also note that another comment suggested to make this time bigger.

SuggestedRemedy
 Replace "16 bit times" with "1 time_quantum"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to 2126

Cl 76A **SC** **P152** **L** # 2048
 Kramer, Glen Teknovus, Inc.

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

Empty page at the end of Annex 76A

SuggestedRemedy
 Remove empty page

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 Moved to 76A
 Frame is as frame is, will try.

Cl 76A **SC 3** **P145** **L 47** # 1787
 KIMURA, Mitsunobu Hitachi Communicatio

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

A word "ie." is shown. Maybe "i.e." is more correct.

SuggestedRemedy
 Should be "i.e."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
 See resolution to comment 2047

Cl 76A **SC 6** **P149** **L 2** # 1788
 KIMURA, Mitsunobu Hitachi Communicatio

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

A word "ie." is shown. Maybe "i.e." is more correct.

SuggestedRemedy
 Should be "i.e."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2047

Cl 76A **SC 6** **P149** **L 6** # 1789
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type **E** **Comment Status** **D** *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).

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 76A **SC 7** **P150** **L 2** # 1790
 KIMURA, Mitsunobu Hitachi Communicatio

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

In L2 and L38, a word "ie." is shown. Maybe "i.e." is more correct.

SuggestedRemedy
 Should be "i.e."

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 2047

Cl 76A **SC 76A** **P145** **L 6** # 1971
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED REJECT.
 Maintaining WEB pages is out of scope.

Cl 76A **SC 76A.3** **P146** **L 1** # 2329
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type **E** **Comment Status** **D**
 Why is this line of text separated from the remainder of the block on page 145 ? Switch the orphan control off.

SuggestedRemedy
 Move line 1 on page 146 back to page 145.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Will beat on frame.

Cl 76A **SC 76A.3** **P146** **L 6** # 2250
 Ganga, Ilango Intel

Comment Type **E** **Comment Status** **D**
 State in the table title row that the table rows follow hexadecimal notation.

SuggestedRemedy
 Per comment

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Will use footnote to table.

Cl 76A **SC 76A.5** **P149** **L 10** # 1972
 Dawe, Piers Avago

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Notation to go in footnote.

Cl 76A **SC 76A.6** **P149** **L 6** # 2022
 Frazier, Howard Broadcom

Comment Type **ER** **Comment Status** **D**
 Table 76A-4 is very hard to read.

SuggestedRemedy
 Delete the "0x" before each entry.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 1972

Cl 76A **SC 76A.6** **P149** **L 7** # 2148
 Lynskey, Eric Teknovus

Comment Type **E** **Comment Status** **D**
 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 column fits on a single line. Remove "0x" from other cells. If necessary, add a footnote stating that the values in those cells are hex.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See resolution to comment 1972

Cl 77 **SC 77.1.5** **P159** **L30** # 2185
 Woodward, Ted Telcordia Technologie

Comment Type E **Comment Status D**
 Seems like a typo "!(a<b or a-b)" and similarly on the following two lines.

SuggestedRemedy
 Correct extra '!' in these 3 lines

Proposed Response **Response Status W**
 PROPOSED REJECT.
 [Subclause number was fixed]
 [Page number was fixed]
 Statements are logically correct.

Cl 77 **SC 77.2.1** **P161** **L1** # 2049
 Kramer, Glen Teknovus, Inc.

Comment Type E **Comment Status D**
 Two separate bullet lists have continuous numbering

SuggestedRemedy
 Restart bullet numbering for the transmit operation

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 [Page number was fixed]

Cl 77 **SC 77.2.2** **P163** **L14** # 1792
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**
 Between the words "ONU the", a comma is needed.

SuggestedRemedy
 Should be "ONU, the".

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 [Subclause number was fixed]

Cl 77 **SC 77.2.2** **P163** **L30** # 2137
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D** *IA_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,

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.2.2.1** **P165** **L45** # 2295
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR **Comment Status D**
 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.2.2.4** **P168** **L14** # 2425
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D**
 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.

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

CI 77 SC 77.2.2.4 P168 L21 # 2297
Hajduczenia, Marek Nokia Siemens Network

Comment Type TR Comment Status D

For FEC encoder adds 32 parity octets for each block of 216 data or control octets, $((\text{frameLen} + \text{preLen} + \text{ipgLen}) / \text{colSize} \times \text{blockSize})$ 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 $((\text{frameLen} + \text{preLen} + \text{ipgLen}) / \text{colSize} \times \text{blockSize}) \times (\text{parityRatio} \times \text{colSize})$

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Change formula for FEC_overhead_min to read as follows:
"FEC_overhead_min = floor((frameLen + preLen + ipgLen) / (colSize * blockSize)) * (parityRatio * colSize)".

CI 77 SC 77.2.2.7 P171 L7 # 2333
Hajduczenia, Marek Nokia Siemens Network

Comment Type T Comment Status D Figure 77-10 transit condition

Figure 77-10 is affected. Transition between states WAIT 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 WAIT 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"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See also comment #2145 and #2144
Change the offending text to "MAC:MA_DATA.indication(DA, SA, {Length/Type, data_rx}, receiveStatus) * Length/Type = MAC_Control_type"

CI 77 SC 77.2.2.7 P171 L8 # 2144
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 77 SC 77.2.2.7 P171 L9 # 2145
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 77 SC 77.2.2.7 P172 L8 # 2146
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
Change to "MA_DATA.indication(DA, SA, {Length/Type, data_rx}, receiveStatus)". See also comment #2144

CI 77 SC 77.2.2.7 P173 L9 # 2135
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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}).

Proposed Response Response Status W

PROPOSED ACCEPT.
See also comment #2144.

CI 77 SC 77.2.2.7 P174 L28 # 2302
Hajduczenia, Marek Nokia Siemens Network

Comment Type TR Comment Status D

In Figure 77-13, a 10G ONU must transmit an integral number of FEC words in its grant time. So nextTxTime should be $\text{nextTxTime} = \text{FEC_Overhead_Max}(\text{sizeof}(\text{data_tx}) + \text{tailGuard}) / (\text{colSize} \times \text{parityRatio}) \times ((\text{parityRatio} + \text{blockSize}) \times \text{colSize})$, which further simplifies to $\text{nextTxTime} = \text{FEC_Overhead_Max}(\text{sizeof}(\text{data_tx}) + \text{tailGuard}) / \text{parityRatio} \times (\text{parityRatio} + \text{blockSize})$. 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 " $\text{nextTxTime} = \text{FEC_Overhead_Max}(\text{sizeof}(\text{data_tx}) + \text{tailGuard}) / \text{parityRatio} \times (\text{parityRatio} + \text{blockSize})$ "

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 77 SC 77.2.2.7 P174 L9 # 2136
Lynskey, Eric Teknovus

Comment Type T Comment Status D 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}).

Proposed Response Response Status W

PROPOSED ACCEPT.
See also comment #2144.

CI 77 SC 77.2.2.7 P172 L18 # 2338
Hajduczenia, Marek Nokia Siemens Network

Comment Type E Comment Status D Figure 77-11 is bold

Figure 77-11 is affected. In state PARSE_TIMESTAMP, the first line of code seems to be bold.

SuggestedRemedy

Unbold it :)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 77 SC 77.2.2.7 P172 L18 # 2050
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.
See comment #2338

CI 77 SC 77.3.2.1 P175 L44 # 2197
Woodward, Ted Telcordia Technologie

Comment Type T Comment Status D

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.'

Proposed Response Response Status W

PROPOSED REJECT.
[Subclause number was fixed]
[Page number was fixed]
The NOTE in line 48 says just that.

Cl 77 **SC 77.3.2.3** **P176** **L 27** # 181541

Rerein, Duane Alcatel-Lucent

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

Invalid reference @@76.1.2.3.3.2@@

SuggestedRemedy

Change to:
@@76.1.6.2.3.2@@

Proposed Response **Response Status** **W**

PROPOSED 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** **P176** **L 35** # 1973

Dawe, Piers Avago

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

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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT IN PRINCIPLE.
Replace "MAC stack" to read "MAC and PHY".

Cl 77 **SC 77.3.3** **P177** **L 10** # 2051

Kramer, Glen Teknovus, Inc.

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

grammar

SuggestedRemedy

"on" should be "of"

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 77 **SC 77.3.3** **P177** **L 25** # 2052

Kramer, Glen Teknovus, Inc.

Comment Type **TR** **Comment Status** **D** *Figure 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. According 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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 77 **SC 77.3.3** **P177** **L 25** # 2334

Hajduczenia, Marek Nokia Siemens Networ

Comment Type **TR** **Comment Status** **D** *Figure 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.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.
See comment #2052

Cl 77 **SC 77.3.3** **P177** **L 3** # 1732

Lin, Rujian Shanghai Luster Terab

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

where multiple ONUs can access the PON simultaneously,

SuggestedRemedy

Correction: when multiple ONUs can access the PON simultaneously,

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 77 **SC 77.3.3** **P179** **L1** # 2332
Hajduczenia, Marek Nokia Siemens Networ

Comment Type **T** **Comment Status** **D** *1A_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.

Proposed Response **Response Status** **W**
PROPOSED ACCEPT IN PRINCIPLE.
See comment #2137

Cl 77 **SC 77.3.3.5** **P182** **L19** # 2340
Hajduczenia, Marek Nokia Siemens Networ

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

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

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 77 **SC 77.3.3.5** **P183** **L19** # 2114
Lynskey, Eric Teknovus

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

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."

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.

Cl 77 **SC 77.3.3.5** **P183** **L34** # 1793
KIMURA, Mitsunobu Hitachi Communicatio

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

"Discovery Process is in the OLT." of "is" not needed in this sentence.

SuggestedRemedy
Should be "Discovery Process in the OLT."

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.
[Subclause number was fixed]

Cl 77 **SC 77.3.3.5** **P184** **L22** # 1794
KIMURA, Mitsunobu Hitachi Communicatio

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

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."

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.
[Subclause number was fixed]

Cl 77 **SC 77.3.3.5** **P184** **L49** # 1795
KIMURA, Mitsunobu Hitachi Communicatio

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

A period (".") is missed.

SuggestedRemedy
Should be "is in the OLT."

Proposed Response **Response Status** **W**
PROPOSED ACCEPT.
[Subclause number was fixed]

Cl 77 **SC 77.3.3.6** **P185** **L 36** # 2138
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D** *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}).

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 Changes to be made in states: SEND DISCOVERY WINDOW

Cl 77 **SC 77.3.3.6** **P186** **L 19** # 2301
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR **Comment Status D**

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]"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.3.3.6** **P186** **L 47** # 2139
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D** *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}).

Proposed Response **Response Status W**
 PROPOSED ACCEPT.
 Changes to be made in states: REGISTER

Cl 77 **SC 77.3.3.6** **P187** **L 1** # 2296
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR **Comment Status D**

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)"

Proposed Response **Response Status W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.3.3.6** **P187** **L14** # 2140
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D** *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}).

Proposed Response **Response Status W**

PROPOSED ACCEPT.
 Changes to be made in states:
 WAIT FOR (.) and DEREGISTER

Cl 77 **SC 77.3.3.6** **P188** **L35** # 2141
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D** *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}).

Proposed Response **Response Status W**

PROPOSED ACCEPT.
 Changes to be made in states: REGISTER_REQUEST, REGISTER_ACK, NACK and LOCAL DEREGISTER

Cl 77 **SC 77.3.4.5** **P190** **L47** # 2053
 Kramer, Glen Teknovus, Inc.

Comment Type E **Comment Status D**

Grammar in the first sentence does not look 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

Proposed Response **Response Status W**

PROPOSED ACCEPT.

Cl 77 **SC 77.3.4.5** **P191** **L18** # 1796
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type E **Comment Status D**

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.

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
 [Subclause number was fixed]
 L18 and L19 will be aligned with L17.

Cl 77 **SC 77.3.6.1** **P202** **L 11** # 1734
 Lin, Rujian Shanghai Luster Terab

Comment Type E **Comment Status D**

Paragraphs:

- c) Grant #n Length.
- d) Grant #n Start Time.

SuggestedRemedy

Propose to inter-change the order of the two paragraphs as:

- c) Grant #n Start Time.
 - d) Grant #n Length.
- according the order of GATE MPCPDU from top to bottom

Proposed Response **Response Status W**

PROPOSED ACCEPT.
 [Page number was fixed]
 Lines 11 through 15 are affected

Cl 77 **SC 77.3.6.1** **P202** **L 12** # 2122
 Lynskey, Eric Teknovus

Comment Type T **Comment Status D**

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."

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
 Change sentence to read "The laserOnTime, syncTime, laserOffTime, burst delimiter ((BURST_DELIMITER, see 76.2.2.5.1), two initial IDLE blocks, FEC parity overhead, and burst terminator (BURST_TERMINATOR, see 76.2.2.5.1) are included in and thus consume part of the Grant #n length."

Cl 77 **SC 77.3.6.1** **P202** **L 18** # 2335
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type TR **Comment Status D** **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@@".

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2056

Cl 77 **SC 77.3.6.1** **P202** **L 18** # 2056
 Kramer, Glen Teknovus, Inc.

Comment Type T **Comment Status D** **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@@".

Proposed Response **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

"During the synchronization time, the ONU shall send a synchronization pattern (SP, see 76.2.2.5.1), followed by a burst delimiter (BURST_DELIMITER, see 76.2.2.5.1) and two IDLE blocks as defined in 76.2.3.5."

Make sure all links are live!

CI 77 SC 77.3.6.1 P202 L3 # 2055
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D

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"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 77 SC 77.3.6.1 P202 L33 # 2057
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D

Sentence is difficult 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 therefore the discovery GATE MPCPDU is marked with the appropriate broadcast LLID (Subclause 77.3.2.3)."

Proposed Response Response Status W

PROPOSED 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)."

CI 77 SC 77.3.6.1 P202 L38 # 1735
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D ble 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

Proposed Response Response Status W

PROPOSED ACCEPT.

See comment #2336

Cl 77 **SC 77.3.6.1** **P202** **L 4** # 1733
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** *Comment Status* **D**
 The Number of grants field

SuggestedRemedy
 Modified to:
 As presented in Table 77-3, the Number of grants field

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.
 Make sure it is implemented together with comment #2336

Cl 77 **SC 77.3.6.1** **P202** **L 5** # 1797
 KIMURA, Mitsunobu Hitachi Communicatio

Comment Type **E** *Comment Status* **D**
 "valid Length, Start Time pairs" is shown. The comma could be replaced as "and".

SuggestedRemedy
 Should be "valid Length and Start Time pairs".

Proposed Response *Response Status* **W**
 PROPOSED REJECT.
 [Subclause number was fixed]
 Pairs of parameters are typically represented using a comma.

Cl 77 **SC 77.3.6.1** **P203** **L 1** # 1736
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** *Comment Status* **D** *ble 77-3 and Table 77-4 order*
 Table 77-3--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.

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.
 See comment #2336

Cl 77 **SC 77.3.6.2** **P204** **L 8** # 2121
 Lyskey, Eric Teknovus

Comment Type **T** *Comment Status* **D**
 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."

Proposed Response *Response Status* **W**
 PROPOSED 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** **P206** **L 6** # 1737
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** *Comment Status* **D**
 b)Flags.....for the registration.

SuggestedRemedy
 Modified to:
 b)Flags.....for the registration, as presented in Table 77-6.

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.3.6.4** **P207** **L 47** # 1738
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** *Comment Status* **D**
 d) Flags. this is..... for the registration.

SuggestedRemedy
 Modified to
 d) Flags. This is..... for the registration, as presented in Table 77-8.

Proposed Response *Response Status* **W**
 PROPOSED ACCEPT.

Cl 77 SC 77.3.6.4 P208 L13 # 2117
 Lynskey, Eric Teknovus

Comment Type T Comment Status D
 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.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.

"During the synchronization time, the ONU shall send a synchronization pattern (SP, see 76.2.2.5.1), followed by a burst delimiter (BURST_DELIMITER, see 76.2.2.5.1) and two IDLE blocks as defined in 76.2.3.5."

Cl 77 SC 77.3.6.5 P209 L21 # 1739
 Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D
 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.....

Proposed Response Response Status W
 PROPOSED ACCEPT.
 [Page number was fixed]
 Lines 21 - 27 are affected

Cl 77 SC 77.4 P210 L36 # 1629
 Anslow, Peter Nortel Networks

Comment Type E Comment Status D 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."

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 77 SC 77.4.1 P210 L38 # 2060
 Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D
 Speed-specific should have a hyphen

SuggestedRemedy
 Add on lines 38, 42, and line 44 on page 211

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 77 SC 77.4.1 P210 L43 # 1740
 Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D
 that may co-exist on the same PON.

SuggestedRemedy
 Correction:
 that may co-exist in the same PON.

Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 77 SC 77.4.1 P211 L1 # 1741
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D
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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
[Page number was fixed]
Change "discovery windows by sending discovery GATE MPCPDUs on both the 1 Gb/s and 10 Gb/s downstream broadcast channels." to "discovery windows by sending discovery GATE MPCPDUs in both the 1 Gb/s and 10 Gb/s downstream broadcast channels."

CI 77 SC 77.4.1 P211 L18 # 2059
Kramer, Glen Teknovus, Inc.

Comment Type T Comment Status D 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:"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 77 SC 77.4.1 P211 L19 # 1742
Lin, Rujian Shanghai Luster Terab

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.
[Page number was fixed]

CI 77 SC 77.4.1 P211 L27 # 2061
Kramer, Glen Teknovus, Inc.

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See comment #2337

CI 77 SC 77.4.1 P211 L27 # 2337
Hajduczenia, Marek Nokia Siemens Networ

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 77 **SC 77.4.1** **P211** **L40** # 1743
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** **Comment Status** **D**
 Figure 77-36--Combinations of.....coexisting on the same PON.

SuggestedRemedy
 Modified to:
 Figure 77-36--Combinations of.....coexisting in the same PON.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 [Page number was fixed]

Cl 77 **SC 77.4.1** **P211** **L6** # 2063
 Kramer, Glen Teknovus, Inc.

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

Proposed Response **Response Status** **W**
 PROPOSED 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** **P211** **L7** # 2058
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** *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]"

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Probably Table 77-10 is referred to.
 See comment #2063

Cl 77 **SC 77.4.2** **P211** **L44** # 2068
 Kramer, Glen Teknovus, Inc.

Comment Type **TR** **Comment Status** **D**
 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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Mark external reference to Clause 64 appropriately.

Cl 77 **SC 77.4.2** **P211** **L45** # 1744
 Lin, Rujian Shanghai Luster Terab

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 [Page number was fixed]

Cl 77 **SC 77.4.2** **P211** **L 45** # 1630
 Anslow, Peter Nortel Networks

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.4.2** **P211** **L 47** # 2339
 Hajduczenia, Marek Nokia Siemens Networ

Comment Type **T** **Comment Status** **D** use 64 reference in Clause 77
 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.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 Live link cannot be provided since C64 does not make part of 802.3av draft.

Cl 77 **SC 77.4.2** **P211** **L 47** # 2069
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D** use 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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 See comment #2339

Cl 77 **SC 77.4.2** **P211** **L 50** # 1745
 Lin, Rujian Shanghai Luster Terab

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 [Page number was fixed]

Cl 77 **SC 77.4.2** **P211** **L 51** # 2062
 Kramer, Glen Teknovus, Inc.

Comment Type **E** **Comment Status** **D**
 "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..."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.4.2** **P211** **L 52** # 1746
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** **Comment Status** **D**
 the ONU may attempt to register on the EPON.

SuggestedRemedy
 Modified to:
 the ONU may attempt to register in the EPON.

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.4.2** **P212** **L10** # 2064
 Kramer, Glen Teknovus, Inc.

Comment Type **T** **Comment Status** **D**
 Many rows in table 77-11 are redundant and can be collapsed

SuggestedRemedy
 Use table as shown in 3av_0809_kramer_2.pdf

Proposed Response **Response Status** **W**
 PROPOSED 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** **P212** **L2** # 1747
 Lin, Rujian Shanghai Luster Terab

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.4.2** **P212** **L4** # 2065
 Kramer, Glen Teknovus, Inc.

Comment Type **E** **Comment Status** **D**
 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."

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 77 **SC 77.4.2** **P212** **L4** # 1748
 Lin, Rujian Shanghai Luster Terab

Comment Type **E** **Comment Status** **D**
 The ONU should attempt to register based during the discovery window.....

SuggestedRemedy
 Correction:
 The ONU should attempt to register during the discovery window.....

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.
 See comment #1748

Cl 77 **SC 77.5.3** **P214** **L19** # 2066
 Kramer, Glen Teknovus, Inc.

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

Proposed Response **Response Status** **W**
 PROPOSED 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** **P214** **L27** # 2067
 Kramer, Glen Teknovus, Inc.

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

Proposed Response **Response Status** **W**
 PROPOSED ACCEPT.

Cl 77 SC 77.5.4.4 P216 L15 # 2115
Lynskey, Eric Teknovus

Comment Type T Comment Status D

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."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

[Changed from "E" to "T"]

"Transmit synchronization pattern (SP, see 76.2.2.5.1), burst delimiter (BURST_DELIMITER, see 76.2.2.5.1), and two IDLE blocks (see 76.2.3.5)."

Cl 99 SC P1 L2 # 1989
Brown, Alan Wave7 Optics, Inc.

Comment Type E Comment Status D

Correctly spell "Amendment".

typo

SuggestedRemedy

Correctly spell "Amendment" in line 2 and line 30.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 99 SC P1 L2 # 2070
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D

Typo

typo

SuggestedRemedy

Amendment = Amendment
Same on line 30

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 99 SC P1 L29 # 2247
Ganga, Ilango Intel

Comment Type E Comment Status D

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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See resolution to comments 1801, 1990

Cl 99 SC P1 L30 # 1801
Kawatsu, Yasuaki Hitachi Cable Ltd

Comment Type E Comment Status D

This draft is a amendment of IEEE ...

SuggestedRemedy

I think this part can be corrected as "This draft is an amendment"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 99 SC P1 L30 # 1990
Brown, Alan Wave7 Optics, Inc.

Comment Type E Comment Status D

Start of 2nd sentence of paragraph was lost.

SuggestedRemedy

Add "It " to the 2nd sentence.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 99 SC P1 L32 # 2101
Kramer, Glen Teknovus, Inc.

Comment Type E Comment Status D

Text still shows D1.802

SuggestedRemedy

Update to latest draft version

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 99 SC P2 L1 # 1991
 Brown, Alan Wave7 Optics, Inc.
 Comment Type E Comment Status D
 The Abstract requires a description.
 SuggestedRemedy
 Enter an appropriate project description.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC P2 L1 # 2246
 Ganga, Ilango Intel
 Comment Type E Comment Status D
 Add abstract of this amendment 802.3av here
 SuggestedRemedy
 As per comment
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC P2 L1 # 2416
 DIAB, WAEL BROADCOM
 Comment Type E Comment Status D
 Abstract information is missing.
 SuggestedRemedy
 Please insert
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC P2 L4 # 2417
 DIAB, WAEL BROADCOM
 Comment Type E Comment Status D
 Would suggest adding additional keywords
 SuggestedRemedy
 Add 10GEAPON
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC P3 L10 # 1988
 Brown, Alan Wave7 Optics, Inc.
 Comment Type E Comment Status D typo
 Correctly spell "consecutively".
 SuggestedRemedy
 Correctly spell "consecutively".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC P3 L8 # 1992
 Brown, Alan Wave7 Optics, Inc.
 Comment Type E Comment Status D typo
 "One exceptions"
 SuggestedRemedy
 Correct to "One exception".
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC 0 P3 L15 # 2248
 Ganga, Ilango Intel
 Comment Type E Comment Status D
 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
 Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 99 SC 99 P10 L1 # 1906
 Dawe, Piers Avago
 Comment Type E Comment Status D
 No contents
 SuggestedRemedy
 Insert Contents pages after participants and before special symbols
 Proposed Response Response Status W
 PROPOSED ACCEPT.

<i>Cl</i> 99	<i>SC</i> 99	<i>P</i> 3	<i>L</i> 8	# 1905
Dawe, Piers		Avago		
<i>Comment Type</i>	E	<i>Comment Status</i>	D	<i>typo</i>
consciously				
<i>SuggestedRemedy</i>				
consciously There are a few other typos: run the spell checker.				
<i>Proposed Response</i>	<i>Response Status</i>		W	
PROPOSED ACCEPT.				