

P802.3ah Draft 1.732 Comments

CI 00 SC P L # 56001
 Wael William Diab
 Comment Type E Comment Status A
 To accept the editorial recommendations from the IEEE Staff Editor on Clauses 00, 01, 56 & 66
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

CI 00 SC P L # 348
 Shohet, Zion Infineon
 Comment Type E Comment Status A
 typo: 025 should be 0.25
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 The commenter is asked to indicate the line, clause and page of the comment

CI 00 SC P 2 L # 518
 Han, Kyeong-Soo ETRI
 Comment Type E Comment Status A
 The word, D1.414, keep remaining on the top of pages, pp.2-8.
 SuggestedRemedy
 change D1.414 to D1.732
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 The correct draft reference will be used on the next revision

CI 00 SC P 3 L 24 # 102
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 Ben's title is awkward.
 SuggestedRemedy
 I'd change to "Logic Editor, EFM Task Force". This would make it similar to other non-STF specific positions (e.g. Hugh's, Scott's, etc)
 Proposed Response Response Status C
 ACCEPT.

CI 00 SC P 5 L 5 # 103
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The comment for Clause 1 contains two errors. In addition, some comments are italicized and some aren't.
 SuggestedRemedy
 Change "Opens" to "Open". Add space between "(OSI) and "reference". Also, make all of the comments either italicized or not.
 Proposed Response Response Status C
 ACCEPT.

CI 00 SC 0 P 0 L 0 # 65000
 Benjamin Brown
 Comment Type E Comment Status A
 Align the OSI Reference model figures for P2MP to match that of Figures 64-1 and 65-1. In particular, remove any reference to an Emulation sublayer between the MAC and the RS in clauses 56 and 60.
 SuggestedRemedy
 See comment.
 Proposed Response Response Status C
 ACCEPT.

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CI 01 SC 0 P L 3 # 255

Dawe, Piers Agilent

Comment Type E Comment Status R
802.3ah not 2002

SuggestedRemedy

Proposed Response Response Status C
REJECT.

If the commentor is referring to the title text:
"IEEE Draft P802.3ah /D1732 (Amendment to IEEE Std 802.3-2002)"

It is correct. The document is an ammendment to the published 2002 standard

CI 01 SC 0 P L 44 # 256

Dawe, Piers Agilent

Comment Type E Comment Status A
Clause 60 title is not up to date

SuggestedRemedy

Physical Medium Dependent (PMD) sublayer and medium, type 1000BASE-PX10 and 1000BASE-PX20 (long wavelength passive optical networks)

Proposed Response Response Status C
ACCEPT.

CI 01 SC 1.3 P 10 L 19 # 257

Dawe, Piers Agilent

Comment Type E Comment Status A
spelling

SuggestedRemedy

Amendment

Proposed Response Response Status C
ACCEPT.

CI 01 SC 1.3 P 10 L 19 # 258

Dawe, Piers Agilent

Comment Type E Comment Status A
.bers

SuggestedRemedy
fibers

Proposed Response Response Status C
ACCEPT.

CI 01 SC 1.3 P 10 L 24 # 279

Dawe, Piers Agilent

Comment Type E Comment Status A
Two more references for the list.

SuggestedRemedy

IEC Publication 61280-2-2, FIBRE OPTIC COMMUNICATION SUB-SYSTEM BASIC TEST PROCEDURES – Part 2-2: Test procedures for digital systems – Optical eye pattern, waveform, and extinction ratio (pending) (Equivalent to ANSI/TIA/EIA-526-4A-1997) and

IEC 61753-1-1, Fibre optic interconnecting devices and passive component performance standard - Part 1-1; General and guidance - Interconnecting devices (connections)

Proposed Response Response Status C
ACCEPT.

CI 01 SC 1.4 P 10 L 52 # 540

Cravens, George Mindspeed

Comment Type E Comment Status A
Typo - .bers should be fibers

SuggestedRemedy

Change .bers to fibers

Proposed Response Response Status C
ACCEPT.

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CI 01 SC 1.4 P 11 L 10 # 107
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The updated definition of Administration was not included in 1.4.
 SuggestedRemedy
 Change definition to read: "A group of network support functions that monitor and sustain link operation."
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Will harmonize with the latest definition from OAM

CI 01 SC 1.4 P 11 L 20 # 106
 Daines, Kevin World Wide Packets
 Comment Type T Comment Status A
 The definition for Discovery is specific to Clause 64 (P2MP). Clause 57 (OAM) also contains a process called "Discovery". Need to resolve this contention.
 SuggestedRemedy
 3 part remedy:
 1) Add the prefix "P2MP" to the current term "Discovery" in 1.4.
 2) Add "OAM Discovery" to 1.4 with the following definition "Process that detects the presence and configuration of the OAM sublayer in the remote DTE".
 3) Add prefix "P2MP" to "Discovery window" (line 25)
 Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.4 P 11 L 28 # 113
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The terms "downstream" and "upstream" have duplicate definitions. See 1.4.77 (2002 edition) for a possible way to resolve.
 SuggestedRemedy
 Fix.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Look at 259

CI 01 SC 1.4 P 11 L 28 # 115
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A GLOBAL
 The definition for downstream contains the abbreviation/acronym "OAN", which is not provided in 1.5. "OAN" only appears in a handful of definitions and does not appear in the text of any clause.
 SuggestedRemedy
 Either add "OAN" to 1.5 or remove given its limited use. I'd recommend removing.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Will remove the use of the term OAN

CI 01 SC 1.4 P 11 L 29 # 260
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 spelling
 SuggestedRemedy
 Trellis
 Proposed Response Response Status C
 ACCEPT.

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CI 01 SC 1.4 P 11 L 29 # 259
 Dawe, Piers Agilent

Comment Type E Comment Status A

Competing definitions of downstream and upstream. These terms apply more broadly than to optical, and -O and -R ports are not in the definitions list.

SuggestedRemedy

Something like "Transmission from a network-side interface towards one or more user-side interfaces." and "Transmission from a user-side interface towards a network-side interface." or something like "towards the core of the network", "towards the periphery of the network".

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

The definitions should be collapsed into one

Downstream: Transmission from a network-side interface towards one (for P2P links) or more (for P2MP links) user-side interfaces

and

Upstream: Transmission from a user-side interface towards a network-side interface

CI 01 SC 1.4 P 11 L 40 # 108
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The definition for LLID should probably be spelled out.

SuggestedRemedy

Change "Logical Link ID (LLID)" to "Logical Link Identifier (LLID)"

Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.4 P 11 L 5 # 105
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Extra period at the end of lines 5 and 8.

SuggestedRemedy

Remove period.

Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.4 P 11 L 52 # 104
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The definition of 100BASE-FX contains two errors.

SuggestedRemedy

Change "networkover two multimode .bers" to read: "network over two multimode fibers".

Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.4 P 12 L 12 # 110
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Propagation is misspelled.

SuggestedRemedy

Fix.

Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.4 P 12 L 25 # 111
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

During an earlier draft review cycle, the OAM STF received a recommendation to avoid the terms "master" and "slave". While I do not find that recommendation written in the IEEE Standards Style Manual, I did agree with the suggestion.

SuggestedRemedy

Avoid the terms "master" and "slave" by finding better alternatives.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Can we get a recommendation from the OAM & P2MP STF

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CI 01 SC 1.4 P 12 L 25 # 112
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 The term timestamp is not unique to Clause 64.

SuggestedRemedy
 Add prefix "P2MP" to "Timestamp" so the reader is clear regarding which timestamp is being referred.

Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.4 P 12 L 54 # 109
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 Grammar.

SuggestedRemedy
 Change "is an slave" to "is a slave".

Proposed Response Response Status C
 ACCEPT.

CI 01 SC 1.5 P 12 L 48 # 114
 Daines, Kevin World Wide Packets

Comment Type TR Comment Status A GLOBAL
 All uses of the abbreviation IFG within 802.3ah are incorrect. Instead, IPG should be used and as such, the abbreviation IFG is not needed and should be removed.

Note: This comment also recommends changes in 58 and 64.

SuggestedRemedy
 Remove abbreviation IFG from 1.5.

In 58.8.1, change "Frames are separated by a near minimum inter-frame gap (IFG) of 14 octets" to read: "Packets are separated by a near minimum inter-packet gap (IPG of 14 octets)."

Please refer to 36A.4 for an example of how to define jitter test packets.

In Table 58-11, change "Idle" to read "IPG"

In 64.2.3.1, change "IFG" to read "IPG" (2 places)

In 64.3.9.4, change "IFG" to read "IPG"

In Figure 64-27, change "IFG" to read "IPG"

Proposed Response Response Status C
 ACCEPT.

ah should be as consistent as possible with previous terminology

CI 01 SC 1.5 P 13 L 21 # 116
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 Trellis is misspelled twice.

SuggestedRemedy
 Fix.

Proposed Response Response Status C
 ACCEPT.

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CI 01 **SC 1.5** **P 15** **L 21** # **541**
 Cravens, George Mindspeed
Comment Type **E** **Comment Status** **A**
 Spelling error - Terrilis Coded should be Trellis Coded
 (Also line 22)
SuggestedRemedy
 Replace Terrilis with Trellis
Proposed Response **Response Status** **C**
 ACCEPT.

CI 04 **SC 4.2.3.2.2** **P 16** **L 19** # **117**
 Daines, Kevin World Wide Packets
Comment Type **E** **Comment Status** **A**
 One use of the constant ifsStretchMultiplier is misspelled.
SuggestedRemedy
 Fix.
Proposed Response **Response Status** **C**
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 22 **SC 22.2.4.1.12** **P 25** **L 18** # **354**
 Messenger, John ADVA Optical Networ
Comment Type **E** **Comment Status** **A**
 The text now states: "The default value of bit 0.1 is zero. When bit 0.12 is one, this bit shall be ignored." As written, this is ambiguous: it is not possible to tell whether it means that 0.1 should be ignored, or 0.12.
SuggestedRemedy
 Suggest rewording the second sentence as "When bit 0.12 is one, bit 0.1 shall be ignored." If that isn't what the text was supposed to mean, then it just goes to show how confusing it was!
Proposed Response **Response Status** **C**
 ACCEPT.

CI 22 **SC 22.2.4.3.12** **P 27** **L 38** # **542**
 Cravens, George Mindspeed
Comment Type **E** **Comment Status** **R**
 The table fragment on page 27 is duplicated on page 28 (MF38, MF39, and MF40), and the ones on page 28 are more complete.
SuggestedRemedy
 Delete the table fragment on page 27, lines 38-46.
Proposed Response **Response Status** **C**
 REJECT.

This fragment is a remnant of the diff process and no longer exists in the actual document.

CI 22 **SC Table 22-7** **P 24** **L 38** # **118**
 Daines, Kevin World Wide Packets
Comment Type **E** **Comment Status** **A**
 The "2" in the "Bit(s)" column should not be struckthrough.
SuggestedRemedy
 Remove strikethrough. Essentially, bits 5:2 are reserved.
Proposed Response **Response Status** **C**
 ACCEPT.

CI 24 **SC 24.2.2.1.7** **P 31** **L 3** # **261**
 Dawe, Piers Agilent
Comment Type **E** **Comment Status** **A** *scope_ed*
 Missing instructions, maybe displaced to line 27?
SuggestedRemedy
 I think this is new material; mark as "insert".
Proposed Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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This instruction somehow got dropped between D1.1 and D1.2. Before this subclause, insert the editor's note text:

"Insert new subclause: "

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CI 24 SC 24.2.4.2 P 32 L 1 # 262
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope_ed
 New term should be underlined
 SuggestedRemedy
 Underline "** mr_unidirectional_oam_enable".
 Proposed Response Response Status C
 ACCEPT.
 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 30 SC 30.1 P 36 L 17 # 263
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 We don't mean to speak of "DTE Power via MDI and subscriber access networks"; they are two separate issues.
 SuggestedRemedy
 Simple fix: just insert a comma: "DTE Power via MDI, and subscriber access networks."
 Or, permanent fix: abandon the laundry list, e.g.: "It incorporates additions to the objects, attributes, and behaviors to support the other features of this standard."
 Similarly on line 26.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 - - -
 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 - - -
 Abandon the laundry list and change the text to read "It incorporates additions to the objects, attributes, and behaviors to support subsequent additions to this standard."

CI 30 SC 30.11.1.1.18 P 68 L 11 # 129
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 Grammar.
 SuggestedRemedy
 Change "when a OAM:MA_DATA.request" to read: "when an OAM:MA_DATA.request".
 Search for subsequent grammar mistakes in this 30.11.*
 Proposed Response Response Status C
 ACCEPT.

CI 30 SC 30.11.1.1.29 P 71 L 13 # 154
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The behavior of the OAM Event thresholds are incorrect.
 SuggestedRemedy
 Change "exceeded" to "met or exceeded" on the following lines:
 page 71, line 13
 page 72, line 5
 page 73, line 5
 page 74, line 4
 Proposed Response Response Status C
 ACCEPT.

CI 30 SC 30.11.1.1.32 P 71 L 42 # 130
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 "Respective" is misspelled.
 SuggestedRemedy
 Fix. David to remind Kevin to run spell check when Kevin edits David's clause.
 Proposed Response Response Status C
 ACCEPT.

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CI 30 SC 30.13.2.3 P 78 L 48 # 131
 Daines, Kevin World Wide Packets

Comment Type T Comment Status A

Management is optional and hence specific attributes can not be made mandatory. Same for 30.13.2.4.

SuggestedRemedy

Strike or re-word sentence "This attribute is mandatory for a OLT and optional for a ONU.;"

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Remove text. Split the Optical Multipoint Emulation Package (Conditional) into two packages, one for OLTs and one for ONUs and include attributes in these packages as required.

CI 30 SC 30.3.1.1.20 P L # 63001
 Michael Beck (Editor CuSTF)

Comment Type T Comment Status A

1. Line 39 references 5.2.2.1.20. However, IEEE Std 802.3-2002, Section One, Page 83 states:

5. Layer Management All parts of Clause 5, except for 5.2.4 and its subclauses, are deprecated by Clause 30.

2. In 5.2.4.1 Common constants and types, the constant maxDeferTime is provided values for various operating speeds. Therefore, add a line speed for EFM.

SuggestedRemedy

In Clause 30, explain that high values of aFramesWithExcessiveDeferral are to be expected with normal operation of any PHY using Clause 61 PCS.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

1st half of comment:

802.3-2002 30.3.1.1.20 aFramesWithExcessiveDeferral

Change the following sentence "The contents of this attribute are undefined for MAC entities operating in full duplex mode."

to read: "The contents of this attribute are undefined for MAC entities operating in full duplex mode or in half duplex mode with simultaneous transmit and receive as specified in 61.1.4.1.1."

- - -

2nd half of comment:

Changing Clause 5 would prevent an EFM Cu PHY from attaching to an existing, compliant MAC via the MII. As a result, it is not recommended that we change Clause 5.2.4.1.

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CI 30 SC 30.3.1.1.31 P 47 L 02 # 268
 Dawe, Piers Agilent

Comment Type E Comment Status A scope

Now that a new term "simu half duplex" has been introduced, is the statement in 1.1 still correct? "This standard provides for two distinct modes of operation: half duplex and full duplex. A given IEEE 802.3 instantiation operates in either half or full duplex mode at any one time."

On the other hand, I don't see where "simu half duplex" is put to use in D1.732.

SuggestedRemedy

Go forward and use "simu half duplex", and add a new subclause 1.1.1.2 to explain it; or go back, remove it from 30 and 30B.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

A new 'term' "simu half duplex" has not been added here, only a new label "simu half duplex" has been added - although if it is agreed that the label is causing confusion it should be changed. This new label only relates to a capability of a MAC, not a new operating mode. This capability is described in subclause 45.2.3.19.1 although this capability and the text in 45.2.3.19.1 need to be aligned as 45.2.3.19.1 describes this as an MII capability.

Proposed changes:

1. Replace "simu half duplex" with a better label.
2. Align the text in 45.2.3.19.1 with the Clause 30 text.
3. Add text to Clause 30 that references 45.2.3.19.1.

CI 30 SC 30.3.2.1.3 P 49 L 17 # 320
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status A scope

Clause 63 missing for 2 BASE-TL

SuggestedRemedy

Besides Clause 61, add Clause 63 as reference for 2BASE-TL.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 30 SC 30.3.5.1.3 P 60 L 15 # 127
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Grammar.

SuggestedRemedy

Change "a MPCP" to "an MPCP". Search through 30.3.5.* for other grammar mistakes.

Proposed Response Response Status C

ACCEPT.

CI 30 SC 30.3.5.1.6 P 60 L 49 # 128
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Grammar.

SuggestedRemedy

Change "of the last MPCPDUs passed" to read: "of the last MPCPDU passed".

Proposed Response Response Status C

ACCEPT.

CI 30 SC 30.3.5.1.8 P 61 L 24 # 267
 Dawe, Piers Agilent

Comment Type E Comment Status A

missing spaces between number and unit

SuggestedRemedy

16 ns. Also on line 46.

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 30 SC 30.5 P 59 L 20 # 473
 Simon, Scott Cisco Systems, Inc.

Comment Type T Comment Status A
 A new copper profile type was added, the "UPBO Reference Profile" to control the Upstream Power Back-Off reference level.

SuggestedRemedy
 Add a new attribute:
 aUPBOReferenceProfile

ATTRIBUTE

APPROPRIATE SYNTAX:
 An ENUMERATED value that has one of the following entries:
 profile 1
 . . .
 profile 9

BEHAVIOR DEFINED AS:
 A read-write value that indicates the 10PASS-TS PHY UPBO reference PSD (see CROSS REF 62A.3.4). A GET operation returns the current UPBO reference PSD. A SET operation changes the UPBO reference PSD to the indicated configuration.

Proposed Response Response Status C
 ACCEPT.

CI 30 SC 30.5.1.1.12 P 54 L 70 # 125
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 "subscribe" should be "subscriber".

SuggestedRemedy
 Fix.

Proposed Response Response Status C
 ACCEPT.

CI 30 SC 30.5.1.1.2 P 51 L 14 # 119
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 The list of enumerations did not get updated with the re-ordering of Clause 58. See lines 14, 15, 18 and 32-35.

SuggestedRemedy
 Fix.

Proposed Response Response Status C
 ACCEPT.

CI 30 SC 30.5.1.1.2 P 51 L 14 # 264
 Dawe, Piers Agilent

Comment Type E Comment Status A
 Per resolution to D1.414 comment 1276, simplex and duplex are confusing here.

SuggestedRemedy
 Replace each instance of "Simplex fiber" or "Duplex fiber" with "one single-mode fiber", "two single-mode fiber" or "two fiber" (LX10) as appropriate.

Proposed Response Response Status C
 ACCEPT.

CI 30 SC 30.5.1.1.2 P 51 L 14 # 265
 Dawe, Piers Agilent

Comment Type E Comment Status A
 Clauses 58 and 60 have been swapped.

SuggestedRemedy
 Swap 58 and 60 here (7 instances).

Proposed Response Response Status C
 ACCEPT.

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CI 30 SC 30.5.1.1.2 P 51 L 14 # 122
Daines, Kevin World Wide Packets

Comment Type E Comment Status A

100BASE-*X* enumerations are incorrect.

SuggestedRemedy

Change 100BASE-BXT enumeration on line 14 to read:
"100BASE-BX10-D Simplex fiber OLT PMD as specified in Clause 58."

Change 100BASE-BXU enumeration on line 15 to read:
"100BASE-BX10-U Simplex fiber ONU PMD as specified in Clause 58."

Change 100BASE-LX enumeration on line 18 to read:
"100BASE-LX10 Duplex fiber PMD as specified in Clause 58."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Change 100BASE-BXT enumeration on line 14 to read:
"100BASE-BX10D Simplex fiber OLT PMD as specified in Clause 58."

Change 100BASE-BXU enumeration on line 15 to read:
"100BASE-BX10U Simplex fiber ONU PMD as specified in Clause 58."

Change 100BASE-LX enumeration on line 18 to read:
"100BASE-LX10 Duplex fiber PMD as specified in Clause 58."

CI 30 SC 30.5.1.1.2 P 51 L 25 # 123
Daines, Kevin World Wide Packets

Comment Type E Comment Status A

1000BASE-*X* enumerations are incorrect.

SuggestedRemedy

Change 1000BASE-BX1T enumeration on line 25 to read:
"1000BASE-BX10-D Simplex fiber OLT PMD as specified in Clause 59."

Change 1000BASE-BX1U enumeration on line 26 to read:
"1000BASE-BX10-U Simplex fiber ONU PMD as specified in Clause 59."

Change 1000BASE-LX1 enumeration on line 27 to read:
"1000BASE-LX10 Duplex fiber PMD as specified in Clause 59."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Change 1000BASE-BX1T enumeration on line 25 to read:
"1000BASE-BX10D Simplex fiber OLT PMD as specified in Clause 59."

Change 1000BASE-BX1U enumeration on line 26 to read:
"1000BASE-BX10U Simplex fiber ONU PMD as specified in Clause 59."

Change 1000BASE-LX1 enumeration on line 27 to read:
"1000BASE-LX10 Duplex fiber PMD as specified in Clause 59."

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CI 30 SC 30.5.1.1.2 P 51 L 32 # 124
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

1000BASE-*X* enumerations are incorrect.

SuggestedRemedy

Change 1000BASE-PX1T enumeration on line 32 to read:
 "1000BASE-PX10-D Simplex fiber OMP OLT 10km PMD as specified in Clause 60."

Change 1000BASE-PX1U enumeration on line 33 to read:
 "1000BASE-PX10-U Simplex fiber OMP ONU 10km PMD as specified in Clause 60."

Change 1000BASE-PX2T enumeration on line 34 to read:
 "1000BASE-PX20-D Simplex fiber OMP OLT 20km PMD as specified in Clause 60."

Change 1000BASE-PX2U enumeration on line 35 to read:
 "1000BASE-PX20-U Simplex fiber OMP ONU 20km PMD as specified in Clause 60."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Change 1000BASE-PX1T enumeration on line 32 to read:
 "1000BASE-PX10D Simplex fiber OMP OLT 10km PMD as specified in Clause 60."

Change 1000BASE-PX1U enumeration on line 33 to read:
 "1000BASE-PX10U Simplex fiber OMP ONU 10km PMD as specified in Clause 60."

Change 1000BASE-PX2T enumeration on line 34 to read:
 "1000BASE-PX20D Simplex fiber OMP OLT 20km PMD as specified in Clause 60."

Change 1000BASE-PX2U enumeration on line 35 to read:
 "1000BASE-PX20U Simplex fiber OMP ONU 20km PMD as specified in Clause 60."

CI 30 SC 30.5.1.1.20 P 55 L 43 # 126
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Behavior contains two grammatical errors that can be fixed by moving one "s".

SuggestedRemedy

Change
 "For 1000 Mbps operation it is a counts of the number of invalid code-group"
 to read:
 "For 1000 Mbps operation it is a count of the number of invalid code-groups"

Proposed Response Response Status C

ACCEPT.

CI 30 SC 30.5.1.1.21 P 56 L 13 # 321
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

Reference to 2BASE-TL (Clause 63) missing

SuggestedRemedy

Add reference

Proposed Response Response Status C

ACCEPT.

CI 30 SC 30.5.1.1.25 P 57 L 03 # 471
 Simon, Scott Cisco Systems, Inc.

Comment Type T Comment Status A

The data rates in the subclause are incorrect. Annex 62A lists upstream payload rates corresponding to 2.5,5,7.5,10,12.5,15,25,35,50,70,100 Mb/s.

By association, 30.5.1.1.26 is also incorrect. Annex 62A lists downstream rates corresponding to 2.5,5,7.5,10,12.5,15,25,35,50 Mb/s.

Also, the cross ref is wrong, should point to 62A.3.6

SuggestedRemedy

Change the definition of the attributes to match the data rates in 62A.3.6

Proposed Response Response Status C

ACCEPT.

Note - It is assumed that this comment should be against subclauses 30.5.1.1.29 aPayloadRateProfileUpstream and 30.5.1.1.30 aPayloadRateProfileDownstream.

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CI 30 SC 30.5.1.1.31 P 58 L 50 # 472
Simon, Scott Cisco Systems, Inc.

Comment Type T Comment Status A
The definition is missing a few new profiles in 62A.

SuggestedRemedy
Add "profile12" through "profile15" to the list

Proposed Response Response Status C
ACCEPT.

CI 30 SC 30.5.1.1.32 P 59 L 07 # 266
Dawe, Piers Agilent

Comment Type E Comment Status A
number1

SuggestedRemedy
number 1

Proposed Response Response Status C
ACCEPT.

CI 30B SC 30B.2 P 107 L 12 # 269
Dawe, Piers Agilent

Comment Type E Comment Status A
Can we have this list in the same order as 30.5.1.1.2 aMAUType, please?

SuggestedRemedy
Will make it easier to check this and future revisions.

Proposed Response Response Status C
ACCEPT.

CI 31A SC P 112 L 25 # 446
Murakami, Ken Mitsubishi Electric

Comment Type E Comment Status A
In Table 31A-1, "timestamp opcodes" used in Figure 64-9 is not indicated.

SuggestedRemedy
In Table 31A-1, it should be indicated that every opcode for GATE, REPORT, REGISTER_REQ, REGISTER, and REGISTER_ACK is one of timestamp opcodes.

Proposed Response Response Status C
ACCEPT.

CI 31A SC Annex P 113 L # 78
Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status R
Would it be better to include similar tables to show the elements and semantics of the request_operand_list for MAC Control request? Some MAC Control request messages with the same opcode have different request_operand_list

For example, in Figure 64-19 on Page 543, there are two request messages with different request_operand_list for opcode = register
1) Line 11, MA_CONTROL.request(DA,register,ID,registerStatus)
2) Line 44, MA_CONTROL.request(DA,register,registerStatus)

SuggestedRemedy

Proposed Response Response Status C
REJECT.
No table was provided for PAUSE operation
Editor would entertain volunteer to draft table.
As no text was provided a rejection is in order at this stage as all comments should be complete. No voluntgeer was found during the meeting to provide the text as requested by the comment.

CI 31A SC Annex P 114 L # 71
Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status A
There is no table showing the elements and semantics of the indication_operand_list for REGISTER MAC Control indication (opcode 0x0005)

SuggestedRemedy
Include table for REGISTER MAC Control indication (opcode 0x0005)

Proposed Response Response Status C
ACCEPT.

CI 31A SC Table 31A-6 P 114 L 28 # 133
Daines, Kevin World Wide Packets

Comment Type E Comment Status A
The cells found in column one comprising the rows for status should be merged. See Table 31A-3, for instance.

SuggestedRemedy
Fix.

Proposed Response Response Status C
ACCEPT.

P802.3ah Draft 1.732 Comments

CI 45 SC 45 P 122 L 1 # 469
 Simon, Scott Cisco Systems, Inc.

Comment Type T Comment Status A
 There are no PICS to go along with the changes to Clause 45

SuggestedRemedy
 Add the PICS subclause and table as in simon_1_0603.pdf to Clause 45

Proposed Response Response Status C
 ACCEPT.

Editor will write PICS for D1.9

CI 45 SC 45.2 P L # 563
 Jeff, Lee Cisco Systems, Inc.

Comment Type T Comment Status A
 Many of the register bit descriptions are still TBD

SuggestedRemedy
 remove the TBDs and replace with detailed descriptions or references to the functions that they describe in the other clauses.

Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.2 P 123 L 30 # 322
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status R
 How is DEVAD mapped to MMD ACCESS control.DEVAD(4:0) (MSB or LSB first) ?

SuggestedRemedy
 Add a note that DEVAD will be mapped LSB first (E.g. DEVAD=1 => control.DEVAD(4:0) = 00001).

Proposed Response Response Status C
 REJECT.

The requested clarification already exists in 802.3ae-2002 45.3.6. Our Clause 45 is an amendment to 802.3ae-2002 and so the final product will incorporate requested clarification.

CI 45 SC 45.2.1 P 114 L 1 # 248
 Beili, Edward Actelis Networks

Comment Type E Comment Status A
 Table doesn't have a number or title.

SuggestedRemedy
 Add a number and name to the table.

Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.2.1 P 115 L 18 # 249
 Beili, Edward Actelis Networks

Comment Type TR Comment Status A
 There's no Rx SNR register for 2BaseTL (similar to SCM Rx SNR register defined).

SuggestedRemedy
 Add 2B Rx SNR register (or share the SCM Rx SNR register already defined). Both local and remote SNR readings are needed. The Remote SNR value shall be transmitted via EOC as specified in G.991.2 (Status Request and SNR/Status EOC messages).

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Share the SCM Rx register, reference G.991.2 or the ref to the place in C63.

P802.3ah Draft 1.732 Comments

CI 45 SC 45.2.1 P 139 L 1 # 250
 Beili, Edward Actelis Networks

Comment Type TR Comment Status A

2BaseTL newly defined Performance Monitoring registers do not have Remote counterparts available. This is unfortunate since if CPE doesn't have a CPU there's not way to know these statistics (note that corresponding values may differ at CO and RT sides of the same line).

SuggestedRemedy

Add "Remote" capability for the PM registers defined for 2BaseTL (Subclauses 45.2.1.44 - 45.2.1.49), so that the "-O" STA may read this values by using teh R-PMA/PMD MMD. Specify the mechanism underlying the retrieval of such remote statistics (Status/Full Status request, Performance Status SHDSL EOC messages).

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

The C45 editor can specify new MMD 7 registers for gathering the remote statistics.

Add remote registers just like SCM.

CI 45 SC 45.2.1.11 P 116 L 16 # 246
 Beili, Edward Actelis Networks

Comment Type TR Comment Status D

Table 45-2, bits: Link Control, Link Status, Initiate handshake and Handshake results. A state diagram is really needed to understand the action logic, i.e. when Link Control and Init. Handshake bits can be set/cleared and correct order of actions.

SuggestedRemedy

- Add a state diagram with Link status and Handshake stages/results states and Link and Handshake Control actions.
- Add an example of bringing a link up, e.g. Force Link Down, Initiate Handshake, wait till handshake completes successfully, Initiate link.

Proposed Response Response Status Z

WITHDRAWN.

The editor agrees that we need a description on how to bring up a link. The editor isn't sure how this works either.

Request the STF advise.

CI 45 SC 45.2.1.11 P 116 L 21 # 247
 Beili, Edward Actelis Networks

Comment Type TR Comment Status A

"Initiate handshake" bit name and values names (handshake inactive, ready; handshake in progress) are confusing, because this bit combines the action and status while the names specify only one side of the story. Also the action of clearing this bit is undefined.

SuggestedRemedy

- Rename the bit to "Handshake Control".
- Rename the values to:
 0 = Stop Handshake/Handshake Inactive
 1 = Initiate Handshake/Handshake In Progress
- Specify that clearing the "Handshake Control" bit while it is set to 1 (Handshake in Progress) shall cause G.991.4 cleardown procedure to be executed. I suggest sending an MS message with "Silent period" bit set.

Proposed Response Response Status C

ACCEPT.

goes with 547

CI 45 SC 45.2.1.11.1 P 116 L 33 # 244
 Beili, Edward Actelis Networks

Comment Type E Comment Status A

Bits 14 through 12 are referenced instead of bits 13 through 15.

SuggestedRemedy

Use "bits 13 through 15".

Proposed Response Response Status C

ACCEPT.

Same as 372

CI 45 SC 45.2.1.41 P 137 L 40 # 254
 Beili, Edward Actelis Networks

Comment Type E Comment Status A

Wrong table reference: Table 45-49 instead of 45-32

SuggestedRemedy

Reference Table 45-32 or say "table below"

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 45 SC 45.2.1.41 P 137 L 53 # 245
 Beili, Edward Actelis Networks

Comment Type T Comment Status A

Wrong value is reserved in Region (both Annex A and Reserved have the same value), also writes cannot be ignored:
 00 = Annex A
 01 = Annex B
 10 = Annex C
 00 = reserved, writes ignored

SuggestedRemedy

00 = Annex A
 01 = Annex B
 10 = Annex C
 11 = reserved

Add a note that Annex A-B refer to ITU-T G.991.2.

Proposed Response Response Status C
 ACCEPT.

Same as 550

CI 45 SC 45.4.1 P 129 L 7 # 380
 Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

There is no 10P/2B PMA/PMD type selction register. It is part of the 10P/2B PMA/PMD control register

SuggestedRemedy

Delete the raw in the table

Proposed Response Response Status C
 ACCEPT.

Same as 323

CI 45 SC 45.4.1 P 129 L 7 # 323
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

The following chapter does not show a type selection register as indicated in Table 45-2 (type selection will be done in 10P/2B PMA/PMD control).

SuggestedRemedy

Remove 2nd line of Table 45-2 (10P/2B PMA/PMD type selection).

Proposed Response Response Status C
 ACCEPT.

Same as 380

CI 45 SC 45.4.1.11 P 131 L 13 # 226
 Tom Mathey Independent

Comment Type T Comment Status A

In column Bit(s), definition is 15:13. In column Description, definition is 2 to 0. In text on line 38 definition is 14 thru 12.

SuggestedRemedy

Make them all the same.

Proposed Response Response Status C
 ACCEPT.

should be 15:13

same as 543

CI 45 SC 45.4.1.11 P 131 L 27 # 324
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

Footnotes for LH and SC missing

SuggestedRemedy

Add footnotes for LH (Latch High) and SC (Self Clearing).

Proposed Response Response Status C
 ACCEPT.

P802.3ah Draft 1.732 Comments

CI 45 SC 45.4.1.11.1 P 131 L 38 # 372
 Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

The PMA/PMD type selection is bits 15 through 13 and not 14 through 12

SuggestedRemedy

Change to "15 through 13"

Proposed Response Response Status C

ACCEPT.

Same as 244

CI 45 SC 45.4.1.11.1 P 131 L 44 # 325
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

Bits "PMA/PMD link status" and "Handshake result" are status bits and should be put into the to be defined status register.

SuggestedRemedy

Define a status register and shift the above mentioned bits into it.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Make a RO status register with the bits mentioned in the comment. The result is a PMA/PMD control register and a PMA/PMD status register. The "capability bits" from comment 544 should go in this register too.

CI 45 SC 45.4.1.13.2 P 132 L 26 # 546
 Cravens, George Mindspeed

Comment Type T Comment Status A

Handshake Result can be read at any time (not just after initiating handshake).

Also, after reset, the bit should be set to "handshake unseccessful" until success is achieved.

Finally, defining success = 0 seems a bit twisted. Redefine 0 = unsuccessful (default), and 1 = handshake successful. (See comment on Table 45-2)

SuggestedRemedy

Replace text on lines 26 & 27 with:

The STA may read the result of the handshake operation in bit 9. Upon reset or an unsuccessful handshake, the PHY shall set this bit to zero. Upon completion of a successful handshake, the PHY shall set this bit to one.

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.4.1.14 P 132 L 33 # 326
 Horvat, Michael Infineon Technologies

Comment Type T Comment Status A

The definition of Link Loss is missing

SuggestedRemedy

G.991.2 offers several Performance Primitives for this task. LOSW DEFECT might be appropriate.

Proposed Response Response Status C

ACCEPT.

Add text:

"Link is lost when PMA_receive_synchronized is false (reference)"

P802.3ah Draft 1.732 Comments

CI 45 SC 45.4.1.14.1 P 132 L # 373
 Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

There is no FEC in 2Base-TL

SuggestedRemedy

Delete 2B from title , table and text of subclause

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.4.1.15 P 133 L # 374
 Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

There is no FEC in 2Base-TL

SuggestedRemedy

Delete 2B from title , table and text of subclause

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.5.1.16 P 144 L # 383
 Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

In table 45-13, the excess bandwidth description granularity is too low

SuggestedRemedy

Change the register to be 6 bit wide for each carrier.

B:=value of bits.

excess bandwidth=B/200

Range: 20<=B<=40

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

The comment is actually technical.

register 6 bits wide.

B := value of bits

excess bandwidth = (20+B)/200

B > 40 invalid.

CI 45 SC 45.5.1.19 P 145 L # 384
 Barnea, Eyal Metalink Broadband A

Comment Type T Comment Status A

Add a 10P SCM recommended excess bandwidth register

SuggestedRemedy

Add a 10P SCM recommended excess bandwidth register with the same structure as the excess bandwidth register in 45.5.1.16.

Proposed Response Response Status C

ACCEPT.

New register will be MMD 1 on the -R only R/W,
 and MMD 7 on the -O RO

CI 45 SC 45.5.1.29 P 151 L 30 # 385
 Beck, Michael Alcatel Bell nv

Comment Type TR Comment Status A

New text needs to be ratified, with minor corrections and additions.

SuggestedRemedy

Adopt text, with changes as shown in beck_1_0603.pdf. Remove Editor's note on page 151.

Proposed Response Response Status C

ACCEPT.

Ask that Michael Beck present beck_1_0603.pdf to the STF.

P802.3ah Draft 1.732 Comments

CI 45 SC 45.5.1.5 P 136 L 45 # 381
 Barnea, Eyal Metalink Broadband A
 Comment Type T Comment Status A
 The granularity in the table is to large
 SuggestedRemedy
 Change the intercept granularity to be 0.25dB.
 15:7 reserved,
 8:0 parameter I. I: Value of bits (2's complement).
 intercept=-(I/4-100)
 Chnage the slope granularity to be 0.01dB.
 range 0 to 40.96 with 0.01dB steps.
 15:12 reserved,
 11:0 parameter S. S: value of bits
 slope=-S/100*sqrt(f)
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.5.1.9 P 140 L # 382
 Barnea, Eyal Metalink Broadband A
 Comment Type E Comment Status A
 In table 45-10, the symbol rate is in baud and not baud/sec
 SuggestedRemedy
 Delete the '/sec ' in the description of all symbol rates
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.1.10 P 162 L 44 # 331
 Horvat, Michael Infineon Technologies
 Comment Type E Comment Status A
 Indices of Loss of Sync Seconds not correct
 SuggestedRemedy
 Adjust indices to (15:0)
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.1.11 P 163 L 10 # 332
 Horvat, Michael Infineon Technologies
 Comment Type E Comment Status A
 Indices of Unavailable Seconds not correct
 SuggestedRemedy
 Adjust indices to (15:0)
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.1.12.1 P 163 L 52 # 333
 Horvat, Michael Infineon Technologies
 Comment Type T Comment Status A
 The PMA frame does not have a Loss of Sync Bit.
 SuggestedRemedy
 Replace Loss of Sync with SEGD.
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.1.2 P 159 L 54 # 550
 Cravens, George Mindspeed
 Comment Type E Comment Status A
 Region code 00 is defined as Region A. Code 11 should be reserved.
 SuggestedRemedy
 Change 00 = Reserved to 11 = Reserved.
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.1.2 P 159 L 54 # 327
 Horvat, Michael Infineon Technologies
 Comment Type E Comment Status A
 Reserved bit definition 00 already defined for Annex A.
 SuggestedRemedy
 Set bit definition 11 to reserved
 Proposed Response Response Status C
 ACCEPT.

Same as 245
 Same as 550

P802.3ah Draft 1.732 Comments

CI 45 SC 45.7.1.4 P 160 L 25 # 551

Cravens, George Mindspeed

Comment Type E Comment Status A

The 2B PMD Parameters register is Table 45-33 (incorrect reference).

Also, pg. 161, line 1, should be Table 45-34.

SuggestedRemedy

Change reference from Table 45-18 to Table 45-33.

Check and repair other references throughout clause.

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.7.1.4 P 160 L 31 # 328

Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

In Table 45-33 definition of bit 15 missing

SuggestedRemedy

Define bit 15 as reserved.

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.7.1.8 P 162 L 5 # 329

Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

Indices of Errored Second not correct

SuggestedRemedy

Adjust indices of Errored Second to (15:0)

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.7.1.9 P 162 L 25 # 330

Horvat, Michael Infineon Technologies

Comment Type E Comment Status A

Indices of Severely Errored Second not correct

SuggestedRemedy

Adjust indices to (15:0)

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.7.3 P 170 L 32 # 378

Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

The name of the 10P/2B PCS status should be 10P/2B TPS-TC status

SuggestedRemedy

Change the register name

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.7.3. P 170 L # 377

Barnea, Eyal Metalink Broadband A

Comment Type E Comment Status A

The 10P/2B PAF overflow counter is missing in Table 45-1

SuggestedRemedy

Add the 10P/2B PAF overflow counter to Table 45-1

Proposed Response Response Status C

ACCEPT.

CI 45 SC 45.7.3.21 P 173 L 52 # 335

Horvat, Michael Infineon Technologies

Comment Type T Comment Status A

Does the PMI Aggregate Bit have to be set if just one PCS is connected to one PMI?

SuggestedRemedy

Add a note that no PMI Aggregate Bits have to be set in case no PAF is used.

Proposed Response Response Status C

ACCEPT.

Add the note.

P802.3ah Draft 1.732 Comments

CI 45 SC 45.7.3.27 P 176 L 50 # 336
 Horvat, Michael Infineon Technologies
 Comment Type E Comment Status A
 Register is missing in PCS overview Table 45-1.
 SuggestedRemedy
 Add this register to overview on page 170.
 Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.3.29 P 177 L 32 # 337
 Horvat, Michael Infineon Technologies
 Comment Type E Comment Status A
 Exact definition of gap is missing. If there are two fragments in a row missing is this one or two gap?
 SuggestedRemedy
 Add a note that every missed fragment causes a gap.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Add a reference to 61.2.2

CI 45 SC 45.7.3.29 P 177 L 49 # 429
 O'Mahony, Barry Intel Corp.
 Comment Type TR Comment Status A
 Need to insert two more subclauses, similar to subclause 45.7.3.29, corresponding to signals PAF_LostStart and PAF_LostEnd in 61.2.2.7.2.
 SuggestedRemedy
 Either:
 1.) insert the two subclauses per the comment (e.g., identical to 45.7.3.29, but with "PAF lost fragment" replace with "PAF lost start of fragment" and "PAF lost end of fragment", respectively), or,
 2.) delete these two signals from 61.2.2.7.2.
 If 1.), add references to new subclauses to 61.2.2.7.2.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

add the new registers

CI 45 SC 45.7.3.30 P 177 L # 379
 Barnea, Eyal Metalink Broadband A
 Comment Type E Comment Status A
 This register is TPS-TC status
 SuggestedRemedy
 Change the subclause title, table title and text to TPS-TC status
 Proposed Response Response Status C
 ACCEPT.

P802.3ah Draft 1.732 Comments

CI 45 SC 45.7.3.30 P 178 L 5 # 224
 Tom Mathey Independent

Comment Type T Comment Status A
 MMD register bit 3.x.15 is a copy of existing 3.1.2. The existing bit 3.1.2 is generic to all Clause 45 PCS's. It is not specific to 10Gig.

SuggestedRemedy
 Replace proposed clause 45.7.3.30, bit 3.x.15 with existing 3.1.2. Add text and register bits to capture latching low status for clause 61 PCS. See 45.2.3.2.2 for example text.

Proposed Response Response Status C
 ACCEPT.

Remove bit and make the text from its description to an amendment to the description of the existing 3.1.2

CI 45 SC 45.7.3.30.1 P 178 L 11 # 338
 Horvat, Michael Infineon Technologies

Comment Type E Comment Status A
 Name of bit is TPS-TC synchronized and not Sync Lost.

SuggestedRemedy
 Call bit TPS-TC synchronized.

Add register TPS-TC errors to Table 45-1.

Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.99.1.1 P 168 L 53 # 375
 Barnea, Eyal Metalink Broadband A

Comment Type T Comment Status A
 It is not clear what "all writes" refers to. During get link partner parameters , the PHY should ignore writes to MMD #7 registers only.

SuggestedRemedy
 Change "all writes" to "all writes to MMD #7 registers".

Proposed Response Response Status C
 ACCEPT.

CI 45 SC 45.7.99.1.2 P 169 L 8 # 334
 Horvat, Michael Infineon Technologies

Comment Type T Comment Status A
 Exact definition of a failed operation does not exist.

SuggestedRemedy
 Define e.g. a timeout of xx msec as a criteria for failed operation.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Add similar text:

The concept of a fail is purposely left ambiguous. I would expect that PHY implementers will specify how long such a timeout would be.

A fail could also occur if the data was not properly transferred but a timeout had not occurred.

CI 45 SC 45.7.99.1.3 P 169 L 33 # 376
 Barnea, Eyal Metalink Broadband A

Comment Type T Comment Status A
 It is not clear what "all writes" refers to. During send link partner parameters , the PHY should ignore writes to MMD #7 registers only.

SuggestedRemedy
 Change "all writes" to "all writes to MMD #7 registers".`

Proposed Response Response Status C
 ACCEPT.

CI 45 SC Table 45-2 P 131 L 13 # 543
 Cravens, George Mindspeed

Comment Type E Comment Status A
 The three-bit "PMA/PMD type selection" field values (1.x.15:13) are shown in the description section under the heading " 2 1 0 ". This should be "15 14 13".

SuggestedRemedy
 Change "2 1 0" in the decription box to "15 14 13".

Proposed Response Response Status C
 ACCEPT.

same as 226

P802.3ah Draft 1.732 Comments

CI 45 SC Table 45-2 P 131 L 12 # 544
 Cravens, George Mindspeed

Comment Type T Comment Status A

The PMA/PMD Type Selection field controls hardware capabilities, and should be Read Only (or else a capability bit needs to be provided for chips that do not support both 10Base-TS and 2Pass-TL).

The PMA/PMD type control is dependant on hardware capabilities as well as board configuration (front-end components, etc.), so while software should be able to detect the type, setting it should be outside the scope of the standard.

SuggestedRemedy

Make the PMA/PMD Type Selection Field Read Only.

NOTE: If the above remedy is unacceptable to the group, then add a capability field (i.e. implement Editor's note on line 44).

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add a capability field to the status register as created in comment 325

CI 45 SC Table 45-2 P 131 L 24 # 547
 Cravens, George Mindspeed

Comment Type T Comment Status A

Defining handshake success = 0 and unsuccess (i.e. failure) = 1 seems a bit backwards. This bit should default to "handshake unsuccessful" after reset, and should also latch that state.

Redefine bit so that success = 1 and default (and latching state) = 0.

SuggestedRemedy

Change the description of bit 1.x.9 (Handshake Result) to:

0 = handshake unsuccessful (Default) RO, LL
 1 = handshake completed successfully

Proposed Response Response Status C

ACCEPT.

See 247

CI 45 SC Table 45-2 P 131 L 28 # 545
 Cravens, George Mindspeed

Comment Type E Comment Status A

Add footnote to describe RO, LH, and SC.

SuggestedRemedy

Add footnote to describe RO, LH, and SC.

Proposed Response Response Status C

ACCEPT.

CI 45 SC Table 45-3 P 132 L 43 # 548
 Cravens, George Mindspeed

Comment Type E Comment Status A

Add "CR" to the last column since the counter is cleared upon read.

SuggestedRemedy

Add "CR" to the last column since the counter is cleared upon read. Also add the definition of "CR" to the footnote.

Proposed Response Response Status C

ACCEPT.

CI 45 SC Table 45-36 P 162 L 5 # 552
 Cravens, George Mindspeed

Comment Type T Comment Status A

Both the errored seconds and severely errored seconds counters are described as 16-bit counters, yet in tables 45-36 and 45-37, they are called ".. errored seconds [31:16]".

The same goes for Tables 45-38 and 45-39.

I classified this as technical in case the counters were intended to be 32 bit.

SuggestedRemedy

(If this was just a typo, then downgrade to editorial.)

If these counters are intended to be 32-bit, then fix the text and registers. Otherwise, fix the descriptions to be ".. errored seconds [15:0]".

Proposed Response Response Status C

ACCEPT.

just a typo.

P802.3ah Draft 1.732 Comments

CI 45 SC Table 45-4 P 133 L 5 # 549
 Cravens, George Mindspeed

Comment Type T Comment Status A

This counter (both high and low-order bytes) should be cleared when the low-order bytes are read ("CR").

Reading the high-order bytes should latch the low-order bytes to allow the counter to be read correctly, and both the high and low order bytes should be cleared after the low-order bytes are read. (Since it takes two reads to get the 32-bit counter, if the lower bytes are not latched upon a read of the upper bytes, an incorrect count is possible.)

Also, the low-order bytes are not "NR" by themselves, but only as part of a 32-bit value. The counter only stops incrementing when it has reached full-scale (i.e. 0xFFFF, not 0xXXFF).

The same applies to Table 45-5 (and all other >16 bit counters).

SuggestedRemedy

Add verbage to the description of these counters (and other >16 bit counters) to explain that while they are read in 16-bit chunks, they must be treated as a >16-bit entity, and care must be taken when reading and clearing.

(Basically, I suggest we ask the editor to clean up the ramblings above to clarify the operation of these counters. It may be cleanest to generate a detailed description of the operation of >16 bit counters in one place, and then reference that description for all >16 bit counters. ("CR+"?).

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Remove the register's NR and CR property.

Use this text (as in the existing C45 32-bit registers, ex: 45.2.2.14):

Whenever the most significant 16 bit register of the counter (xxx) is read,the 32 bit counter value is latched into the register pair,with the most significant bits appearing in (xxx) and the least significant 16 bits appearing in (xxx) ,the value being latched before the contents of (xxx) (the most significant 16 bits) are driven on the MDIO interface. A subsequent read from register (xxx) will return the least significant 16 bits of the latched value, but will not change the register contents. Writes to these registers have no effect.

CI 56 SC 56.1.3 P 167 L 39 # 251
 Beili, Edward Actelis Networks

Comment Type TR Comment Status R

Table 56-1. There is no name for a 10PASS/2BASE Phy's aggregating a number of pairs.

SuggestedRemedy

Suggest adding a copper pair multiplier to the basic Phy name, i.e.
 8x2BASE-TL-O - 8 pair 2BaseTL Phy at CO with 8x2=16Mbps aggregated rate
 2x10PASS-TS-R - 2 pair 10PassTS Phy at RT with 2x10=20Mbps aggregated rate

Proposed Response Response Status U

REJECT.

As with link aggregation as defined by 802.3ad there is no need to define a new aggregation naming. Moreover, the naming does not differentiate the phy type

Motion at TF to reject comment 251

Moved: Wael Diab
 Second: Brad Booth

All: Y: 50 N:6 A:19
 .3: Y:32 N:7 A:11

Motion Passes

CI 56 SC 56.1.3 P 189 L 34 # 270
 Dawe, Piers Agilent

Comment Type E Comment Status R

At some time we need to sort out the terminology used in Table 56-1 and in many other places. In the location columns, we need to agree the same words for both optical and electrical. As I believe OLT and ONU are items, not locations (or interfaces) and cannot apply to the electrical systems, perhaps the use of "CO" and "subscriber" will work here.

SuggestedRemedy

Either now or when the whole draft is re-opened for commenting, in Table 56-1, change "OLT" to "CO" and "ONU" to "subscriber".

Proposed Response Response Status C

REJECT.

Will go with the commentors recommendation to defer on this issue till WG ballot. At which point, we invite the commentor to present an alternative naming convention that has broad consensus.

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CI 56 SC Figure 56-1 P 186 L 16 # 120
Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Figure has font size inconsistencies. Text within wide layer stack and MII definition are different than balance of Figure and other similar figures within EFM.

SuggestedRemedy

Fix fonts. Also, fix PMD types for P2P and P2MP optics.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Will fix the fonts once, when there are no more changes to the figure

CI 57 SC 57 P 169 L 01 # 57003
EFM Chief Editor

Comment Type E Comment Status A

Incorporate comments from IEEE editorial staff;

- 1) comma in clause title, wherever OAM is spelled out
- 2) add other commas as provided by Wael
- 3) add dash to Annex 43B title "802.3-2002"

SuggestedRemedy

See comment.

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57 P 193 L 11 # 181
Daines, Kevin World Wide Packets

Comment Type E Comment Status A

With the addition of 1.4 in D1.732, the terms administration, maintenance and operations can be removed from lines 13-17.

With the addition of 1.5 in D1.732, the abbreviations OAM and OAMPDU can be removed from lines 20 and 21.

SuggestedRemedy

See comment.

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.1.2 P 170 L 27 # 57002
OAM STF Editor

Comment Type E Comment Status A

Michael Beck raised issue with Matt Squire regarding Copper's inability to operate unidirectionally. This requires a change to bullets a-2 and a-4 in 57.1.2.

Page/Line is from plain version.

SuggestedRemedy

Change a-2: "Subscriber access physical layer devices, defined in Clauses 58, 59, 62 and 63. . ."

to read: Subscriber access physical layer devices, defined in Clauses 58 and 59. . ."

- - -

Change a-4: "Physical layer devices other than those defined in Clauses 58, 59, 60, 62 and 63 may support. . ."

to read: "Physical layer devices other than those defined in Clauses 58, 59 and 60 may support. . ."

Proposed Response Response Status C

ACCEPT.

OAM STF and Editor will follow-up with Copper STF and try to determine if there are any conditions under which a copper link could operate unidirectionally.

CI 57 SC 57.2.3 P 197 L 29 # 188
Veerayah, Kumaran Institute for Infocomm

Comment Type E Comment Status A

Having reference to section where OAM client is expected to manage OAM remote loopback will be helpful for clarity.

SuggestedRemedy

Add "see 57.2.8" after "loopback mode"

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Propose adding "(see 57.2.8)" after "loopback mode".

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CI 57 SC 57.2.3 P 197 L 30 # 158

Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Order of sentences could be changed to improve readability.

SuggestedRemedy

Move sentence beginning on line 30 "The OAM client does not" to follow the second sentence of the paragraph.

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.2.3 P 197 L 38 # 189

Veerayah, Kumaran Institute for Infocomm

Comment Type E Comment Status A

Since OAM client compares the sequence number to determine if the OAMPDU is a duplicate, the words, "sequence number" may be better suited.

SuggestedRemedy

Change sentence to:

"OAM client ignores OAMPDUs with same sequence number, which are deemed as having duplicate event information (see 57.4.3.2)."

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.2.3.a P 203 L 04 # 462

Arnold, Brian Cisco Systems

Comment Type E Comment Status A

Just a nit for clearer text at the end of this sentence: "The OAM sublayer shall respond to critical link events by setting or clearing the appropriate bits within the Flags field on ensuing OAMPDUs, if any."

SuggestedRemedy

How about: "...by setting or clearing the appropriate bits within the Flags field on any subsequently generated OAMPDUs."

Not much better, but somehow wanted to make it clearer this means for PDUs that will be transmitted to the remote DTE, and couldn't be twisted and interpreted to mean that somehow received PDUs get manipulated and tied up with local critical events. A nit for sure. A reject won't ruin my day.

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.2.4 P 197 L 47 # 159

Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The term "service" is missing.

SuggestedRemedy

Add "service" before "primitives" on lines 47 and 48.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.2.5.2.3 P 198 L 52 # 177

Daines, Kevin World Wide Packets

Comment Type T Comment Status A

The term "shall" needs to be removed from this sentence as a conformance requirement is not implied here.

SuggestedRemedy

Change "shall" to read: "is to".

Remove PICS entry OFS1.

Note: PICS entry *CSI covers all of the OAM client service interfaces.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 57 SC 57.2.5.3.3 P 199 L 30 # 160
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Change wording for consistency.

SuggestedRemedy

Change "The OAMPDU.indication" to "This primitive" on page 199, line 30.
 Change "The OAM_CTL.request" to "This primitive" on page 200, line 36.
 Change "The OAM_CTL.indication" to "This primitive" on page 201, line 17.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.2.6.1 P 202 L 11 # 190
 Veerayah, Kumaran Institute for Infocomm

Comment Type T Comment Status A

The last sentence gives a wrong impression that Passive device is able to send loopback commands and variable requests.

SuggestedRemedy

Remove this sentence.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #191.

CI 57 SC 57.2.6.2 P 202 L 18 # 191
 Veerayah, Kumaran Institute for Infocomm

Comment Type T Comment Status A

The last sentence gives a wrong impression that passive DTE is capable of sending variable requests or loopback control OAMPDUs.

SuggestedRemedy

Remove the sentence

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change Table 57-1 title to read "Active and Passive mode behavior"

Change last line of 57.2.6 to read "Table 57-1 contains the behavior of Active and Passive mode DTEs."

Note: Also, resolves comment #190.

CI 57 SC 57.2.7.1 P 202 L 30 # 161
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Incomplete description of subclause.

SuggestedRemedy

Add "and encoding" after "definition".

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 57 SC 57.2.7.3 P 203 L 08 # 192

Veerayah, Kumaran Institute for Infocomm

Comment Type E Comment Status A

"Optionally" in the last sentences sounds misleading

SuggestedRemedy

Remove it. "may" in the sentence is clear enough.

Proposed Response Response Status C

ACCEPT.

- - -

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

- - -

CI 57 SC 57.2.8 P 203 L 31 # 460

Arnold, Brian Cisco Systems

Comment Type T Comment Status A

Requesting a clarification or removal of ambiguity in local sinking of loopbacked frames.

Text says, "In addition, an implementation may analyze loopback frames to determine additional information...". Is it the intention here that the OAM sublayer may pass the received non-OAMPDUs up to the MAC client or the OAM client for such analysis of the frame content (which is in conflict with Figure 57-3 and 57.2.8.2.e), or that the OAM sublayer itself may perform such analysis? If the former, Figure 57-3 and 57.2.8.2.e should be modified. If the latter, text should be clear that such analysis should be performed in OAM sublayer.

This may already be understood within the STF but could be clearer in the text.

SuggestedRemedy

Two choices:

Choice a) If the intention is to allow non-OAMPDU loopback frames to be passed to OAM client or MAC client for content analysis, then these items should be changed.

Suggestions:

- 57.2.8 line 31: "In addition, an implementation may pass loopback frames to OAM client or MAC client for analysis to determine additional information about the..."

- Figure 57-3: Where the datapath sinks at OAM sublayer, somehow indicate optional passing of received data upwards from OAM sublayer. (How? dotted-dotted line?)

- 57.2.8.2.e: "...OAMPDUs are passed to the OAM client and all other frames are discarded, unless they are being passed upwards for content analysis."

Choice b) If the intention is that the OAM sublayer may be allowed to perform content analysis itself, suggest slight alterations as follows:

- 57.2.8 line 31: "In addition, an implementation may analyze loopback frames within the OAM sublayer to determine additional information..."

As always, the Esteemed Editor is free to offer his superior wordage.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

- - -

Were this a formal recirculation ballot, the comment would be out of scope because it

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does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

A joint OAM/P2MP STF meeting (New Orleans?) resulted in the addition of the referenced text. In essence, the P2MP STF wanted to have "room" for implementations to analyze frames before dropping them.

The humble Editor, therefore, proposes the adoption of this refined, well-formed and otherwise recherche verbiage. (Note: the French-derived adjective since the interim is in Eastern Canada. :)

- 57.2.8 line 31: "In addition, an implementation may analyze loopback frames within the OAM sublayer to determine additional information about the health of the link (e.g...."

CI 57 **SC 57.2.8.1** **P 204** **L 17** # **194**

Veerayah, Kumaran Institute for Infocomm

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

Nothing wrong, but sentence is rather long

SuggestedRemedy

Suggest rephrasing it:

"An OAM client is in a loopback mode if it has sent a Loopback Control OAMPDU and is waiting for the peer DTE to respond with an Information OAMPDU. If it receives a loopback command instead of an Information OAMPDU, the following procedure is RECOMMENDED:"

or the editor can phrase it better.

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

REJECT.

The first sentence of the suggested remedy is not correct. The mere sending of a Loopback Control OAMPDU doesn't put a DTE into loopback mode. An indication via the state information found in Information OAMPDUs is required.

The Editor agrees the text is a bit long, but it is explicit.

CI 57 **SC 57.2.8.1** **P 204** **L 17** # **193**

Veerayah, Kumaran Institute for Infocomm

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

Typo: should be "a Loopback" instead of "an Loopback"

SuggestedRemedy

as in comment

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

ACCEPT.

CI 57 **SC 57.2.8.2** **P 204** **L 37** # **461**

Arnold, Brian Cisco Systems

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

Anticipating future questions about remote loopback, it might be a good idea to explicitly state what happens to the source and destination addresses when frames are looped back at the remote DTE. Specifically, item (b) could be enhanced as below to answer questions like, "don't I need to swap the source and destination before I loop it back?".

SuggestedRemedy

Change item (b): Within the remote OAM sublayer entity, every non-OAMPDU, including other Slow Protocol frames, is looped back without altering any field of the frame.

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

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 57 SC 57.2.8.5 P 205 L 25 # 463
Arnold, Brian Cisco Systems

Comment Type E Comment Status A

Problem with swapped "transmit" and "received" in last sentence of paragraph:

"When a bidirectional link has asymmetric data rates, frame loss may occur because the transmit bandwidth is less than the received bandwidth".

SuggestedRemedy

Could just swap "transmit" and "received" to make more sense, but better might be:

"...data rates, frame loss may occur if the receive bandwidth is less than the transmit bandwidth."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Okay, as written it's a little awkward. It was written with the CPE device in mind. Propose we accept the 2nd suggested remedy.

CI 57 SC 57.2.9 P 205 L 03 # 170
Daines, Kevin World Wide Packets

Comment Type T Comment Status A

There is no standalone subclause that discusses OAM Unidirectional operation. It is mentioned in 57.1.2 and in Table 57-7 and a few other places, but there is no single, definitive reference.

SuggestedRemedy

Add 57.2.9 OAM unidirectional operation as a standalone subclause.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Add subclause 57.2.9 to read:

"57.2.9 OAM unidirectional operation

OAM provides an OAMPDU-based mechanism to notify the remote DTE when one side of a link is non-operational and therefore data transmission is disabled [footnote n]. The ability to operate a link in a unidirectional mode for diagnostic purposes supports the maintenance objective of failure detection and notification.

Some physical layer devices support Unidirectional OAM operation (see 22.2.4.1.12, 22.2.4.2.8, 66.6.1). When a link is operating in Unidirectional OAM mode, the OAM sublayer ensures that only OAMPDUs are sent across the link. These OAMPDUs contain the critical link event indicating the receive path has failed. These OAMPDUs may be sent continuously."

[footnote n] Note to balloters: (to be removed prior to publication) This is customary throughout all of Ethernet.

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CI 57 SC 57.3.1.2 P 206 L 49 # 162
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Remove unused state diagram variables.

SuggestedRemedy

Remove "ind_flags_field" from page 202, line 49.
 Remove "OAM_CTL.indication" from page 209, line 41.
 Remove "OAM_CTL.request" from page 209, line 42.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.3.1.2 P 208 L 24 # 171
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The variable name local_tx is misleading as it governs both transmission and reception of OAMPDUs.

SuggestedRemedy

Change "local_tx" to "local_pdu".
 Change "NONE" to "RX_INFO"
 Leave "INFO" as is.
 Leave "ANY" as is.

In rest of clause, change references to "local_tx" as appropriate.

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.3.1.2 P 208 L 46 # 163
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Wrong parameter.

SuggestedRemedy

Change "local_link_fault" to "local_link_status" on page 208, line 46.
 Same change on page 211, line 52.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.3.2.1 P 210 L 22 # 228
 Yokomoto, Tetsuya FUJITSU ACCESS LIM

Comment Type E Comment Status A

It may confuse Discovery of OAM with Discovery of MPCP.

SuggestedRemedy

In the clause 57, it describes OAM Discovery.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The suggested remedy is unclear. 57.3.2.1 can be changed to "OAM Discovery". Is this what the commentor intended?

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CI 57 SC 57.3.2.2 P 211 L 38 # 172
 Daines, Kevin World Wide Packets

Comment Type TR Comment Status A

The Transmit rules are confusing as they stand in D1.732. They describe functionality that exists in both the Control and Multiplexer functions. This confusion can be cleared up if the following changes are made:

- Change "transmission of OAMPDUs" on line 40 to "generation of OAM.MADR service primitives
- Move (a) to 57.3.3.6 as it actually describes Multiplexer functionality
- Re-word balance of 57.3.2.2 to use "OAM.MADR" terminology.
- Remove (e) as it actually describes Multiplexer functionality

The Transmit rules are found in 57.3.2.2 to imply behavior of the Control function. The Control function given its position within the OAM sublayer can only interact with the OAM client and the Multiplexer function. The Multiplexer function sitting downstream of the Control enforces pdu rate, etc.

SuggestedRemedy

Change 57.3.2.2 to read:

"The following rules govern the generation of the OAM:MADR service primitive:

- a) While local_pdu is set to RX_INFO, OAM:MADR service primitives shall not be generated.
- b) While local_pdu is set to INFO, only Information OAMPDUs shall be sent to the Multiplexer function via the OAM:MADR service primitive.
- c) While local_pdu is set to ANY:
 - 1) An OAM_CTL.request service primitive with one or more of the critical link event parameters set shall generate an OAM:MADR service primitive, requesting the transmission of an Information OAMPDU with the appropriate bit(s) of the Flags field set.
 - 2) An OAMPDU.request service primitive shall generate an OAM:MADR service primitive, requesting the transmission of the particular OAMPDU."

The PICS entries OFS3-5 need to be updated as well.

Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.3.2.3 P 213 L 29 # 173
 Daines, Kevin World Wide Packets

Comment Type TR Comment Status A

The Receive rules in D1.732, while better than the Transmit rules, need to be cleaned up.

In essence, these changes are recommended:

- Move text regarding OAM client behavior to 57.2.3
- Combine RX_INFO and INFO
- Remove (b) as this describes Parser functionality
- Remove (c) as this is redundant to the response rules found in 57.4.3 and irrelevant to this subclause

SuggestedRemedy

Change 57.3.2.3 to read:

"The following rules govern the reception of OAMPDUs:

OAM:MADI service primitives indicate an OAMPDU and in turn generate an OAMPDU.indication service primitive to the OAM client entity subject to the following conditions:

- a) When local_pdu is set to RX_INFO or INFO, Information OAMPDUs shall be passed to the OAM client and non-Information OAMPDUs are discarded.
- b) When local_pdu is set to ANY, all Information OAMPDUs, including those with unknown Code fields shall be passed to the OAM client. [footnote #1] It is anticipated that the OAM client will ignore unknown or unsupported OAMPDUs."

[footnote #1] should be retained

PICS entries OFS6-7 need to be updated.

Add a paragraph to 57.2.3 to read:

"Upon receiving an Information OAMPDU with a Revision field equal to that of the previous Information OAMPDU, an OAM client may choose to ignore processing the fields of the Information OAMPDU as no new information will be learned."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Strike "Information" from (b)

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CI 57 SC 57.3.3.2 P 214 L 48 # 164
Daines, Kevin World Wide Packets

Comment Type E Comment Status A
Heading level could be changed to improve readability.

SuggestedRemedy
In DIFF version,
Change 57.3.4.2 to 57.3.4.1.1
Change 57.3.4.3 to 57.3.4.1.2
Change 57.3.4.4 to 57.3.4.1.3
Change 57.3.4.5 to 57.3.4.1.4
Change 57.3.4.6 to 57.3.4.2

In PLAIN version,
Change 57.3.3.2 to 57.3.3.1.1
Change 57.3.3.3 to 57.3.3.1.2
Change 57.3.3.4 to 57.3.3.1.3
Change 57.3.3.5 to 57.3.3.1.4
Change 57.3.3.6 to 57.3.3.2

Proposed Response Response Status C
ACCEPT.

CI 57 SC 57.3.4 P 214 L 21 # 448
Murakami, Ken Mitsubishi Electric

Comment Type E Comment Status A
Description "local_tx=NONE | pdu_cnt!=10" is not suitable.

SuggestedRemedy
It should be "local_tx=NONE + pdu_cnt!=10".

Proposed Response Response Status C
ACCEPT.

Good catch.

CI 57 SC 57.3.4 P 214 L 21 # 447
Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status R
According to the current state transition condition from CHECK_LINK in Figure 57-5, frames can be sent even if local_link_status is FAIL.

SuggestedRemedy
The state transition condition from CHECK_LINK to TX_FRAME should be "local_unidirectional=FALSE * local_link_status=OK". And the state transition condition from CHECK_LINK to WAIT_FOR_TX should be "local_unidirectional=TRUE + local_link_status=FAIL".

Proposed Response Response Status C
REJECT.

The second paragraph of 57.3.4.4 attempts to describe this non-intuitive logic.

When the state CHECK_LINK is entered, the frame is to be sent is either from the MAC client or it is a loopback frame. If the receive path is non-functional (local_link_status=FAIL) -and- the underlying PHY is both capable and configured to transmit frames while the receive path is non-functional (local_unidirectional=TRUE), the OAM sublayer DOES NOT WANT TO FORWARD frames from the MAC client. The ONLY FRAMES it wants to send, in this condition, are OAMPDUs. That is why the state transition from CHECK_LINK to WAIT_FOR_TX is what it is.

If, however, the receive path is functional (link_status=OK) -or- the underlying is not capable or not configured to operate in unidirectional mode (local_unidirectional=FALSE) it is SAFE to forward frames (either from the MAC client or loopback frames) to the subordinate sublayer. If the link is functioning, the frames will be sent all the way down the stack and across the link. If the link is non-functional, the PHY will drop the frames, WHICH MATCHES THE BEHAVIOR OF 802.3 TODAY.

Note: ALL CAPS used since other forms of highlighting text, such as color, italics and underlining, are not available using these database tools.

See comment #170, which added a subclause discussing OAM Unidirectional operation.

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CI 57 SC 57.3.4.2 P 215 L 03 # 363
 Martin, David Nortel Networks
 Comment Type E Comment Status A
 Wording change.
 SuggestedRemedy
 Change "one of more OAMPDUs have been sent" to "one or more OAMPDUs have been sent"
 Proposed Response Response Status C
 ACCEPT.
 Same as comment #195.

CI 57 SC 57.3.4.2 P 215 L 03 # 195
 Veerayah, Kumaran Institute for Infocomm
 Comment Type E Comment Status A
 Typo: should be one "or" more OAMPDUs
 SuggestedRemedy
 As commented
 Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.3.4.3 P 215 L 09 # 227
 Yokomoto, Tetsuya FUJITSU ACCESS LIMi
 Comment Type T Comment Status A
 The non-critical definition is not clear. In Figure 57-5, It is described "NORMAL".
 SuggestedRemedy
 The non-critical definition should clearly be described in "non-critical". It should clarify the difference between "non-critical" and "NORMAL".
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Proposed changing "If the request is non-critical," to read:
 "If the Flags field of the OAMPDU to be sent does not contain any critical link events, "

CI 57 SC 57.3.4.3 P 215 L 13 # 165
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 Definition of local_tx needs to be augmented.
 SuggestedRemedy
 Continue definition of local_tx by changing "is in reset." to "is in reset or is waiting for the remote DTE to send Information OAMPDUs."
 Make same change on page 215, line 47.
 Proposed Response Response Status C
 ACCEPT.
 Per another comment local_tx is changed to local_pdu.

CI 57 SC 57.3.4.6 P 216 L 07 # 364
 Martin, David Nortel Networks
 Comment Type E Comment Status A
 Wording change.
 SuggestedRemedy
 Change "If the PDU timer has elapsed" to "If the PDU timer has expired"
 Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.3.5.1 P 216 L 45 # 196
 Veerayah, Kumaran Institute for Infocomm
 Comment Type E Comment Status A
 Parser:MADI is now, OAM:MADI
 SuggestedRemedy
 Change to OAM:MADI
 Proposed Response Response Status C
 ACCEPT.
 Good catch.

CI 57 SC 57.4.2 P 218 L 23 # 361

Messenger, John ADVA Optical Networ

Comment Type T Comment Status A

Is it intended that OAMPDUs shall be transmitted exactly as shown in the figures? I could not find an explicit statement to that effect. Alternatively, is the structure of the OAMPDUs containing TLVs basically a language, such that for example an Information OAMPDU could have the order of the Local and Remote OAMPDUs interchanged? Or pushing it one stage further, can a conformant implementation include additional TLVs in a standard OAMPDU for his own purposes?

SuggestedRemedy

Change line 23 to include a statement clarifying how closely the specification defines the OAMPDU content, taking into account the fact that some OAMPDUs do change in structure during operation of the protocol (Info sometimes doesn't contain Remote Info TLV).

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

In the opinion of the Editor, the suggested remedy is unnecessary as the draft is sufficiently clear. 57.4.1 describes the "transmission and representation" of octets within figures and tables. 57.4.2 contains a shall covering the fields of the OAMPDUs, from DA through FCS. In addition, each of the OAMPDUs includes a shall covering the Data field.

In order to make Information OAMPDUs more flexible and extensible, the following changes will be made:

CHANGE #1: Addition of Organization Specific Information TLV

Add:

"57.5.2.3 Organization Specific Information TLV

The Organization Specific Information TLV shall have the following fields:

- a) Information Type = Organization Specific Information. This one-octet field indicates the nature of the data carried in this TLV-tuple. The encoding of this field is found in Table 57-x.
- b) Information Length. The one-octet field indicates the length (in octets) of this TLV-tuple. The length of an Organization Specific Event is unspecified.

c) Organizationally Unique Identifier. This three-octet field contains the 24-bit Organizationally Unique Identifier.

d) Organization Specific Value. This field indicates the value of the Organization Specific Information. This field's length and contents are unspecified."

CHANGE #2: Add Information TLV Table similar to Table 57-10

Add Table 57-x similar to 57-10. It will have the following rows:

- 0x00 - Reserved
- 0x01 - Local Information TLV
- 0x02 - Remote Information TLV
- 0x03-FD - Reserved
- 0xFE - Organization Specific Information TLV
- 0xFF - Reserved

CHANGE #3) Lock down position/order of Local (0x01) and Remote (0x02)

Reword page 193, 23 as follows:

"The Information OAMPDU Data field, at a minimum, shall consist of the Local Information TLV (see 57.5.2.1) immediately following the Code field. If the Discovery state diagram variable remote_state_valid is TRUE, the Data field shall also contain the Remote Information TLV (see 57.5.2.2), immediately following the Local Information TLV. The Information OAMPDU Data field may also contain other Information TLVs found in Table 57-x."

CHANGE #4) Change Figure 57-8 to reflect above.

- 1) Change the line of the Remote TLV box to use "dash style".
- 2) Add dashed box, with following text:
"Information TLV #3 (in italics)"
- 3) Combine data/pad field with 42-1496 length to the left.

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CI 57 SC 57.4.3 P 219 L 54 # 355
 Messenger, John ADVA Optical Networ

Comment Type TR Comment Status A

Lines 43, 47, 54.
 (Lines 43 and 47 have changed since D1.4 even though they are not diff-marked.)
 New in D1.7: OAMPDUs with reserved codes are passed to OAM Client. We need a
 "shall" statement to prohibit transmission of reserved OAMPDU codes. The lack of this in
 the current wording threatens the extensibility of the protocol, because if a conformant
 implementation is not prohibited from transmitting reserved codes, then someone will use
 them and they will effectively not be available for future use in extending 802.3ah.

SuggestedRemedy

Add a statement (e.g. after line 54) similar to: "OAMPDUs with reserved Code field values
 shall not be transmitted."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add PICS entry in either OAMPDU section or Reserved section.

Note: Exact location of statement will be determined during editing cycle.

CI 57 SC 57.4.3.1 P 220 L 04 # 356
 Messenger, John ADVA Optical Networ

Comment Type E Comment Status A

Current text: "The Information OAMPDU frame structure shall be *implemented* as
 depicted in Figure 57-8". Concern: the wording before the addition of "implemented" was
 correct - this is widely used standards language. The standard defines the specification,
 not the implementation.

Other occurrences: 57.4.3.2 p220 L34, 57.4.3.3 p221 L19, 57.4.3.4 p222 L4, 57.4.3.5 p222
 L35, 57.4.3.6 p223 L43.

SuggestedRemedy

Remove the word "implemented".

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.4.3.1 P 220 L 12 # 79
 Takashi, Ezawa OF Networks

Comment Type E Comment Status A

There are Typo in the Figure 57-8.
 It is defined in subclause 57.5.2.1, the Version field is one-octet and the Revision field is
 two-octets.

SuggestedRemedy

Proposed Response Response Status C

ACCEPT.

CI 57 SC 57.4.3.1 P 220 L 12 # 449
 Murakami, Ken Mitsubishi Electric

Comment Type E Comment Status A

The length of Version and Revision fields of Information PDU shown in Figure 57-8 is
 different from the descriptions of 57.5.2.1 and 57.5.2.2.

SuggestedRemedy

They should be consistent to each other.

Proposed Response Response Status C

ACCEPT.

Identical to comment #79.

CI 57 SC 57.4.3.1 P 220 L 17 # 360
 Messenger, John ADVA Optical Networ

Comment Type T Comment Status A

Note: this line is incorrectly not diff-marked in the draft.
 In figure 57-8, the "Octets" column is not correct in all cases. The "Data" length is 32 later
 in Discovery, but earlier it is 16, as the Remote Information TLV is not always present (per
 line 24). The Pad length would change as well.

SuggestedRemedy

Either change the specific values to (e.g.) 16/32 for Data and 26/10 for Pad, or, as a more
 general and better solution, make it clear in the diagrams that the Octet column is an
 example rather than a requirement.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

See comment #361, which is changing Figure 57-8.

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CI 57 SC 57.4.3.1 P 220 L 25 # 167
Daines, Kevin World Wide Packets
Comment Type E Comment Status A
Cross-reference should be moved to improve readability.
SuggestedRemedy
Move "(see 57.5.2.1)" following TLV on previous line.
Proposed Response Response Status C
ACCEPT.

CI 57 SC 57.4.3.2 P 221 L 03 # 464
Arnold, Brian Cisco Systems
Comment Type T Comment Status A
Probably mostly an editorial comment, but listed as technical in case the logic has to change...
Use of duplicate sequence numbers could be clearer. Specifically, the restriction on their use should be enumerated. If the usage intent is as per stated here ("...the OAM client compares the Sequence Number with the last received Sequence Number. If equal, the current event is a duplicate..."), then that implies that duplicate Event Notification OAMPDUs must be adjacent (in the Event Notification OAMPDU domain) and cannot be interleaved with other Event Notification OAMPDUs in order to be perceived as a duplicate.
Basically, I think this means that Event Notification OAMPDUs received in this order (identified by Sequence Number): A - A - B - B - C - C will be recorded as one instance each of A, B, and C. Event Notification OAMPDUs received in this order (A - B - A - B - C - C) will be recorded as five unique OAMPDUs (due to the non-equal comparisons). This won't be good.
Some choices to fix this:
a) Explicitly state that duplicate Event Notification OAMPDUs must follow the PDU they are duplicates of without any other Event Notification OAMPDU in between. Another way, state that duplicate Event Notification OAMPDUs cannot be transmitted if another, different Event Notification OAMPDU has already been transmitted following the original. This affects the transmitter.
b) Maintain a longer comparison list than just the last Sequence Number (so you can compare the last 5? 10? 20?).
c) Include in the comparison that the Sequence Number must also be greater than the last received Sequence Number to be unique (rollover notwithstanding), so as to handle the A-B-A-B-C-C case. This affects the receiver.
SuggestedRemedy
I think a combination of (a) and (c) may be best. Suggested wording starting at the end of line 2:
To make the transmitter follow the rules:
"A particular Event Notification OAMPDU may be sent multiple times with the same sequence number, but any duplicate transmitted must follow its original without a different, intervening Event Notification OAMPDU. A duplicate Event Notification OAMPDU cannot be transmitted if a new Event Notification OAMPDU has already followed the original OAMPDU.

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To protect the receiver from out-of-order duplicates:

At the end of line 5:

"...the OAM client compares the Sequence Number with the last received Sequence Number. If equal, the current event is a duplicate and is ignored by the OAM client. If the current event's Sequence Number is less than the last received Sequence Number (accounting for 16-bit Sequence Number rollover), the current event is not considered a new, unique event and is ignored by the OAM client."

The Editor is free to clarify as needed.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

- - -

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

- - -

Change to read:

"A particular Event Notification OAMPDU may be sent multiple times with the same sequence number. It is recommended that any duplicate Event Notification OAMPDU follow its original without a different, intervening Event Notification OAMPDU. A duplicate Event Notification OAMPDU should not be transmitted if a new Event Notification OAMPDU has already followed the original OAMPDU."

Second portion of remedy is adopted.

CI **57** *SC* **57.4.3.4** *P* **222** *L* **25** # **180**
 Daines, Kevin World Wide Packets

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

Sentence defines behavior of OAM client. Perhaps this should be changed to a recommendation?

SuggestedRemedy

See comment. Affects PICS entries PDU15-17.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

- - -

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

- - -

Change "shall" to "needs to" on line 2, line 4. Also, "is shall" on line 5 will be changed to "it needs to".

CI **57** *SC* **57.4.3.5** *P* **223** *L* **21** # **357**
 Messenger, John ADVA Optical Networ

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

Current text: "Table 57-5 contains the list of defined Loopback Commands". "Contains the list of" could be better worded.

SuggestedRemedy

Suggest "Table 57-5 lists the defined Loopback Commands".

Proposed Response *Response Status* **C**

ACCEPT.

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CI 57 SC 57.5.1 P 224 L 36 # 359
 Messenger, John ADVA Optical Network

Comment Type E Comment Status A

Current text: "TLV processing should follow these recommendations".
 It isn't really TLV processing that should do this, but OAMPDU parsing, as some of the recommendations are about what to do when finding unexpected TLVs in an OAMPDU.

SuggestedRemedy

Suggest moving 57.5.1 into 57.4.
 Please also note that lines 50 and onwards on page 224 don't belong in a section called "Parsing" - they are lead-in to the remaining parts of 57.5.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

As to the first part of the comment, the editor considers it a good idea to co-locate the TLV parsing recommendations with the TLV definitions. The Variable Container/Descriptor parsing rules are similarly co-located with the Variable Container/Descriptor format definition.

As to the second part of the comment,
 - - -

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 - - -

However, these two lines add little value and the editor proposes they be removed.

CI 57 SC 57.5.1 P 224 L 43 # 358
 Messenger, John ADVA Optical Network

Comment Type TR Comment Status D

I understand that we don't want or need to require a strictly specified parsing algorithm. However there are some requirements on the parsing algorithm that make the difference between a protocol capable of backward-compatible extension and one that isn't. Of those listed in 57.5.1, item "c" should be required.

SuggestedRemedy

Include, in an appropriate place, a requirement similar to: "TLVs with unknown or unexpected Types shall be ignored".

Proposed Response Response Status Z
 WITHDRAWN.

CI 57 SC 57.5.2.2 P 199 L 08 # 57001
 OAM STF Editor

Comment Type E Comment Status A

Note: page and line are on plain version.

"OAM_Information" should read "Remote Information".

SuggestedRemedy

See comment.

Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.5.3 P 228 L 06 # 362
 Messenger, John ADVA Optical Network

Comment Type E Comment Status A

Title of Figure 57-10. Current title is "Event TLVs" but this is not correct.

SuggestedRemedy

Suggest change to "Event TLV Types".

Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.5.3.2 P 229 L 50 # 155
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The cross-references to aOAMLocalErrFrameConfig are incorrect.

SuggestedRemedy

Change cross-ref 30.11.1.1.30 to 30.11.1.1.31 on page 229, line 50 and page 230, line 4.

Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.5.3.3 P 230 L 44 # 156
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The cross-references to aOAMLocalErrFramePeriodConfig are incorrect.

SuggestedRemedy

Change cross-ref 30.11.1.1.31 to 30.11.1.1.33 on page 230, line 44 and page 231, line 1.

Proposed Response Response Status C
 ACCEPT.

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CI 57 SC 57.5.3.4 P 231 L 42 # 157
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The cross-references to aOAMLocalErrFrameSecsSummaryConfig are incorrect.
 SuggestedRemedy
 Change cross-ref 30.11.1.1.32 to 30.11.1.1.35 on page 231, line 42 and page 231, line 50.
 Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.7.3.1 P 236 L 46 # 178
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 OFS3 should be moved adjacent to OFS11. The Multiplexer function is responsible for both of these PICS entries. A separate comment moved the text from 57.3.2.2 to 57.3.3.6.
 SuggestedRemedy
 See comment.
 Proposed Response Response Status C
 ACCEPT.

CI 57 SC 57.7.2.3 P 236 L 18 # 174
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The reference for *LB is wrong.
 SuggestedRemedy
 Change cross-ref "57.1.2" to "57.2.8, Table 57-7".
 Proposed Response Response Status C
 ACCEPT.

 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.7.3.2 P 237 L 31 # 179
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The term "service" is missing.
 SuggestedRemedy
 Add "service" to CEV2 and LEV1 before "primitive".
 Proposed Response Response Status C
 ACCEPT.

 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.7.2.3 P 236 L 20 # 175
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The cross-reference for *UNI is wrong.
 SuggestedRemedy
 Change "57.1.2" to "57.2.9, Table 57-7".
 Proposed Response Response Status C
 ACCEPT.

 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 57 SC 57.8.4 P 242 L 14 # 465
 Arnold, Brian Cisco Systems
 Comment Type E Comment Status A
 PICS doesn't match description of ET1. PICS has "Error_Total", which doesn't exist in 57.5.3.1.
 SuggestedRemedy
 Remove "Error_Total" from ET1.
 Proposed Response Response Status C
 ACCEPT.
 Same as comment #80.

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CI 57 SC 57.8.4 P 242 L 15 # 80

Takashi, Ezawa OF Networks

Comment Type E Comment Status A

Table of Event TLVs (clause 57.8.4)

There is a terminology named "Error Total" in the Item of ET1.
But it isn't defined in the subclause 57.5.3.1.
Is this a Typo?

SuggestedRemedy

Proposed Response Response Status C

ACCEPT.

Same as comment #465.

Yep, this is a typo.

CI 57 SC 57.8.4 P 242 L 33 # 466

Arnold, Brian Cisco Systems

Comment Type E Comment Status A

Typo in PICS, ET3. "Time_Stamp" should be "Event_Time_Stamp", per 57.5.3.3.

SuggestedRemedy

Change "Time_Stamp" to "Event_Time_Stamp".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Note: There are no longer any underscores in the field names for TLVs. Hence, "Time Stamp" will be replaced with "Event Time Stamp".

CI 57 SC 57.8.4 P 242 L 46 # 467

Arnold, Brian Cisco Systems

Comment Type E Comment Status A

PICS ET4 needs correction, per 57.5.3.4.

SuggestedRemedy

"Time_Stamp" should be "Event_Time_Stamp"

"Errored_Frame_Seconds_Window" should be
"Errored_Frame_Seconds_Summary_Window"

"Errored_Frame_Seconds_Threshold" should be
"Errored_Frame_Seconds_Summary_Threshold"

"Errored_Frame_Seconds" should be "Errored_Frame_Seconds_Summary"

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Accepted, except underscores will be removed. See comment #466.

CI 57 SC 57.8.4 P 243 L 06 # 468

Arnold, Brian Cisco Systems

Comment Type E Comment Status A

PICS ET5 needs correction, per 57.5.3.5.

SuggestedRemedy

"Organization_Specific_Length" should be "Event_Length".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Accepted, except underscores will be removed. See comment #466.

CI 57 SC figure 57-8 P 220 L 12 # 523

jee sook, eun ETRI

Comment Type E Comment Status A

Version field is one-octet.

SuggestedRemedy

Correct octet number "2" to "1".

Proposed Response Response Status C

ACCEPT.

Identical to comment #79.

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CI 57 SC figure 57-8 P 220 L 13 # 524
jee sook, eun ETRI
Comment Type E Comment Status A
Revision field is two-octets.
SuggestedRemedy
Correct octet number "1" to "2".
Proposed Response Response Status C
ACCEPT.

Identical to comment #79.

CI 57 SC table 57-1 P 201 L 43 # 521
jee sook, eun ETRI
Comment Type E Comment Status A
Footnote "a" must be deleted.
It was commented by Draft 1.414 comment #271.
"An Active device should be permitted to send EN OAMPDUs to a Passive device."
SuggestedRemedy
Delete the reference to footnote "a" in Table 57-1 entry column 2, row 4.
Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

Table 57-1 in the DIFF version is confusing. Please see the PLAIN version. You will notice three things:
1) the footnote is not on row 4
2) the footnote is correctly applied to rows 6 & 8
3) the footnote is "a" both in the table and below the table

Note: No changes are needed as a result of this comment.

CI 57 SC Table 57-1 P 201 L 49 # 522
jee sook, eun ETRI
Comment Type E Comment Status A
Footprint "a" was deleted.
Footprint "b" was inserted.
SuggestedRemedy
Change Footprint "a" to "b" in Table 57-1 entry column 2, row 9.
Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

See comment #521.

CI 57 SC Table 57-3 P 219 L 14 # 166
Daines, Kevin World Wide Packets
Comment Type E Comment Status A
Wrong variable referenced.
SuggestedRemedy
Change "local_stable" to "remote_stable" on line 14 and line 16.
Proposed Response Response Status C
ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 57 SC Table 57-7 P 227 L 01 # 176
 Daines, Kevin World Wide Packets

Comment Type T Comment Status A

Currently, the only optional features advertised via the OAM Configuration field are Loopback Support and Unidirectional Support. Recommend we add:

- Link Events
- Variable Retrieval
- Organizational Specific OAMPDU
- Organization Specific Events

As of D1.732, the optionality of Events, Variable Retrieval, Organization Specific OAMPDU and Organization Specific TLV was spelled out in the PICS 57.7.2.3. See major options *EVNT, *VAR, *OSP, *OSE.

SuggestedRemedy

Change reserved field from 7:3 to just bit 7.

Add new row for bit 3 / Link Events / 1=DTE is capable of interpreting Link Events; 0=DTE is not capable of interpreting Link Events

Add new row for bit 4 / Variable Retrieval / 1=DTE is capable of sending Variable Response OAMPDUs; 0=DTE is not capable of sending Variable Response OAMPDUs

Add new row for bit 5 / Organization Specific OAMPDU / 1=DTE is capable of interpreting Organization Specific OAMPDU; 0=DTE is not capable of interpreting Organization Specific OAMPDU

Add new row for bit 6 / Organization Specific Events / 1=DTE is capable of interpreting Organization Specific Events; 0=DTE is not capable of interpreting Organization Specific Events

If one or more of these features are added to Table 57-7, the appropriate PICS entry(ies) would need to be updated.

With only one spare bit, perhaps this field should be expanded to two octets?

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Change remedy to use "support" rather than "capable" as in the following example:

"Add new row for bit 3 / Link Events / 1=DTE supports interpreting Link Events; 0=DTE does not support interpreting Link Events"

See comment #361, which is adding an Organization Specific Information TLV.

CI 57 SC Table 57-7 P 227 L 17 # 168
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

OAM Mode description is incomplete.

SuggestedRemedy

Change "1=Active mode." to "1=DTE configured in Active mode." on line 17.
 Change "0=Passive mode." to "0=DTE configured in Passive mode." on line 18.

Proposed Response Response Status C
 ACCEPT.

CI 57 SC Table 57-9 P 227 L 40 # 169
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Table name is incorrect.

SuggestedRemedy

Remove "_".

Proposed Response Response Status C
 ACCEPT.

CI 58 SC P 245 L 1 # 68
 Bhatt, Vipul Individual

Comment Type E Comment Status A diff errors

The DIFF version and the PLAIN version are mismatched in several locations where the PLAIN version is correct, and the DIFF version is incorrect.

SuggestedRemedy

Make the corrections.

Proposed Response Response Status C
 ACCEPT.

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CI 58 SC 58 P 245 L 12 # 271
 Dawe, Piers Agilent

Comment Type E Comment Status A
 Obsolete material following clause re-numbering.

SuggestedRemedy

Either, shorten to "When all test procedures are stable, if a test procedure is then identical to Clause 52, we may delete it here and refer to 52."
 Or, delete it altogether, as I think everything we copied has been bug-fixed so is no longer identical; leave stripping out the duplication to maintenance.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Delete text.

CI 58 SC 58.1 P 246 L 9 # 272
 Dawe, Piers Agilent

Comment Type E Comment Status A
 Lost a comma.

SuggestedRemedy

"the medium, single-mode fiber." or "the medium (single-mode fiber)."

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Change to: "this clause specifies the 100BASE-LX10 PMD and the 100BASE-BX10 PMDs for operation over single mode fiber"

make same change to 59

CI 58 SC 58.11.2.3 P 279 L 16 # 282
 Dawe, Piers Agilent

Comment Type E Comment Status A

This text even as revised is still problematical:
 "Device supports downstream wavelength (1550 nm) over single single-mode fiber operation" because it supports the other wavelength equally much: one transmit, one receive.

SuggestedRemedy

Maybe "Device operates with one single single-mode fiber and transmits at downstream wavelength (1550 nm)"? Likewise for BU.

Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.3.1 P 250 L 29 # 132
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 Extra word.

SuggestedRemedy

Remove "Clause".

Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.3.1 P 250 L 29 # 273
 Dawe, Piers Agilent

Comment Type E Comment Status A
 Unnecessary "Clause"

SuggestedRemedy

Delete "Clause" at the end of line 29.

Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.5.2 P 255 L 11 # 423
 Dawe, Piers Agilent

Comment Type T Comment Status A sensitivity

Because this standard defines sensitivity for a pattern with an assumed 1 dB baseline wander penalty at 10⁻¹² BER and 6.6 dB extinction ratio, while TTC defines sensitivity for a regular PRBS (no baseline wander penalty) at 10⁻¹⁰ BER and 8.2 dB extinction ratio, I think our 100BASE-BX10 sensitivity should be -30 +0.4 dB for extinction ratio +0.4 dB for BER + 1dB = -28.2 dB, not -29.2 dB. My apologies if we have discussed this before: the aim is still to make the EFM and TTC receiver specs equivalent.

SuggestedRemedy

If this is agreed, change 100BASE-BX10 sensitivity to -28.2 dBm, OMA to -27.1 dBm or 1.94 uW, and raise stressed sensitivity (3 numbers) by 1 dB also.

Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Accept the changed values

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CI 58 SC 58.6 P 256 L 9 # 424
 Dawe, Piers Agilent

Comment Type T Comment Status A sensitivity

As Jerry pointed out, the 100BASE-BX10 budgets do not match the transmit and receive powers.
 Min Tx - Sens = available power budget (not loss budget).

If another comment Because this standard defines sensitivity for a pattern with an assumed 1 dB baseline wander penalty at 10⁻¹² BER and 6.6 dB extinction ratio, while TTC defines sensitivity for a regular PRBS (no baseline wander penalty) at 10⁻¹⁰ BER and 8.2 dB extinction ratio, I think our sensitivity should be -30 +0.4 dB for extinction ratio +0.4 dB for BER + 1dB = -28.2 dB, not -29.2 dB. My apologies if we have discussed this before: the aim is still to make the EFM and TTC receiver specs equivalent.

SuggestedRemedy

If another comment is accepted, change 1000BASE-BX budget to 14.2, and allocation for penalties to 8.7 downstream and 8.2 upstream. If it is not accepted, 15.2, 9.7, 9.2.

Proposed Response Response Status C

ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Accept the values of suggested remedy
 See #423.

CI 58 SC 58.7 P 256 L 22 # 275
 Dawe, Piers Agilent

Comment Type E Comment Status A

Text is obsolete now we have changed the table.

SuggestedRemedy

Delete ", and values in the range of 0.3 to 0.4 UI have been considered".

Proposed Response Response Status C

ACCEPT.

CI 58 SC 58.7 P 256 L 30 # 274
 Dawe, Piers Agilent

Comment Type E Comment Status A

Text refers to "High probability jitter" while table has "Deterministic jitter"

SuggestedRemedy

Add text to explain the similarity, change column heading to "High probability jitter".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Accept "High probability jitter" with the corresponding changes to 59 and 60

CI 58 SC 58.7 P 256 L 41 # 283
 Dawe, Piers Agilent

Comment Type E Comment Status A

New table contents may be misleading without more explanation.

SuggestedRemedy

Extend the note: "NOTE - Informative jitter values are chosen to be compatible with the limits for eye mask and TDP (see 58.8.9). Because of the way the different components may interact, the differences in jitter between test points cannot be used to indicate a performance level of the intervening sections."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt suggested text. Make the note into a footnote to Table 58-10.

CI 58 SC 58.8.1 P 257 L 38 # 20
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

CDR is first mention in this document

SuggestedRemedy

Suggest adding in Clock and Data Recovery for this term.
 clock and data recovery (CDR).

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 58 SC 58.8.2 P 259 L 4 # 276
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Reference won't be B8 any more, now that 1.3 is being built.
 SuggestedRemedy
 Delete "[B8]".
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.8.3 P 259 L 4 # 277
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Another reference to be added to the normative list.
 SuggestedRemedy
 Insert ANSI/EIA-455-95 into lists, in 1.3 and in 58 p245, and remove from Annex A. Delete "[B7]" here.
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.8.4 P 259 L 16 # 278
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Another reference going normative.
 SuggestedRemedy
 Remove ANSI/TIA/EIA-526-4A from Annex A. Delete "[B13]" here and in 58.11.3.5.
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.8.5 P 260 L 5 # 280
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 D1.414 comment 747 seems to have been applied to the wrong subclause.
 SuggestedRemedy
 Remove "52*ref*, 53*ref*," from here and insert in the NOTE at end of 58.8.6.
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.8.8 P 264 L 26 # 136
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 Grammar.
 SuggestedRemedy
 Change "an transmitter" to "a transmitter".
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 58.8.9 P 264 L 43 # 281
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Title is not aligned with other clauses. It's good to have "TDP" show up in the contents list, making it easier for the reader who has forgotten/never knew what TDP is, to find out.
 SuggestedRemedy
 "Transmitter and dispersion penalty (TDP) measurement"
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 8.11.4 P 273 L 19 # 62
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Incorrect references to table numbers.
 SuggestedRemedy
 Correct them. (Replace 59-7 with 59-8, 59-9 with 59-10, and add 60-11.)
 Proposed Response Response Status C
 ACCEPT.

CI 58 SC 8.12 P 274 L 4 # 64
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Incorrect reference to subclause 60.8.
 SuggestedRemedy
 Correct it.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Remove reference.

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CI 58 SC 8.8 P 263 L 39 # 61
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Potentially confusing sentence: The CRU filters out low frequency jitter and wander which is not considered a defect.
 SuggestedRemedy
 Change to: The CRU tracks low frequency jitter and wander.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Change to: "The CRU tracks acceptable levels of low frequency jitter and wander."

CI 58A SC P 601 L 53 # 58
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Typo error: The input the pattern may be...
 SuggestedRemedy
 Change to: The input pattern may be...
 Proposed Response Response Status C
 ACCEPT.

CI 58A SC P 602 L 1 # 59
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Typo error: ...based of FCS errors.
 SuggestedRemedy
 Change to: ...based on FCS errors.
 Proposed Response Response Status C
 ACCEPT.

CI 58A SC P 602 L 29 # 60
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Typo error: ...the test set may recognized...
 SuggestedRemedy
 Change to: ...the test set may recognize...
 Proposed Response Response Status C
 ACCEPT.

CI 58A SC 58A P 601 L 41 # 151
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 Grammar.
 SuggestedRemedy
 Change "test system" to read: "test systems".
 Proposed Response Response Status C
 ACCEPT.

CI 58A SC 58A P 601 L 44 # 152
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A attn
 Clause 4 moved away from "rate adaption" and is using "rate control".
 SuggestedRemedy
 Change "altered by rate adaptation mechanisms" to read: "altered by rate control mechanisms"
 Proposed Response Response Status C
 ACCEPT.

CI 58A SC 58A P 602 L 6 # 411
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 rate and ratio
 SuggestedRemedy
 Change rate to ratio, twice, in this sentence, to give: "The bit error ratio may be determined by dividing the frame error ratio by ..."
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC P 283 L 1 # 69
 Bhatt, Vipul Individual
 Comment Type E Comment Status A diff errors
 The DIFF version and the PLAIN version are mismatched in several locations where the PLAIN version is correct, and the DIFF version is incorrect.
 SuggestedRemedy
 Make the corrections.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

P802.3ah Draft 1.732 Comments

CI 59 SC 1 P 284 L 1 # 81
Swanson, Steve Corning Incorporated

Comment Type TR Comment Status R

I found it extremely difficult to comment on the change bar version. As the editor of Clause 59, this document doesn't reflect what I submitted nor does it reflect what is in the plain version. I would have no comments if the version I submitted was what I received.

SuggestedRemedy

I don't know if it is a software problem or a handoff problem but we can't be taking time commenting on previously resolved comments.

Proposed Response Response Status C

REJECT. The commenter should note that this is not a valid TR comment. The spirit of the comment is accepted and the issue will be raised in Ottawa

CI 59 SC 1 P 284 L 17 # 83
Swanson, Steve Corning Incorporated

Comment Type T Comment Status A

Software issue.

SuggestedRemedy

Replace lines 17-45 on Page 284 with lines 1-32 on Page 285.

Proposed Response Response Status C

ACCEPT.

CI 59 SC 1 P 284 L 7 # 82
Swanson, Steve Corning Incorporated

Comment Type E Comment Status A

Incorrect PMD designation (which was correct in the version submitted).

SuggestedRemedy

Change "...100BASE-LX10 PMD, 100BASE-BX10 PMDs,..." to "...1000BASE-LX10 PMD, 1000BASE-BX10 PMDs,..."

Proposed Response Response Status C

ACCEPT.

CI 59 SC 11.1 P 306 L 12 # 94
Swanson, Steve Corning Incorporated

Comment Type E Comment Status A scope
Formatting

SuggestedRemedy

Center PMD type under Fiber optic cabling.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made

CI 59 SC 12.3.2 P 312 L 31 # 95
Swanson, Steve Corning Incorporated

Comment Type T Comment Status A table delete

Duplicate Tables (OK in Plain version)

SuggestedRemedy

Delete first Table.

Proposed Response Response Status C

ACCEPT.

CI 59 SC 12.3.5 P 313 L 29 # 96
Swanson, Steve Corning Incorporated

Comment Type T Comment Status A table delete

Duplicate Tables (OK in Plain version)

SuggestedRemedy

Delete first Table.

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 59 SC 12.3.7 P 316 L 20 # 97
 Swanson, Steve Corning Incorporated
 Comment Type T Comment Status A table delete
 Duplicate Tables (OK in Plain version)
 SuggestedRemedy
 Delete first Table.
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 12.3.8 P 317 L 18 # 98
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Formatting.
 SuggestedRemedy
 Delete "59.12.3.8"
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 3.4 P 289 L 53 # 84
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Incorrect format
 SuggestedRemedy
 Utilize hard space to keep 8B/10B on one line.
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 4.1 P 290 L 30 # 85
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Incorrect PMD designator
 SuggestedRemedy
 Replace "...1000BASE-PX10..." with "...1000BASE-LX10..."
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 4.2 P 293 L 27 # 86
 Swanson, Steve Corning Incorporated
 Comment Type TR Comment Status A table delete
 Table 59-8 is incorrect and not what was submitted - it does not include the bit error ratio, stressed eye jitter values nor the sinusoidal jitter limits. In addition, when the plain version of the document is viewed, the entire Table disappears.
 SuggestedRemedy
 Insert the correct Table (Table 59-7 in the draft submitted by the Clause editor).

Proposed Response Response Status C
 ACCEPT.

CI 59 SC 59.1 P 284 L 7 # 284
 Dawe, Piers Agilent
 Comment Type E Comment Status R
 Need a comma.
 SuggestedRemedy
 "the medium, single-mode fiber." or "the medium (single-mode fiber)."

Proposed Response Response Status C
 REJECT. The implementation of the D1.414 comment resolution is incorrect. The first sentence should read: "This clause specifies the 1000BASE-LX10 PMD for both single-mode and multimode fiber, and the 1000BASE-BX10 PMD for single-mode fiber." See resloution to 272

CI 59 SC 59.11.3 P 306 L 52 # 398
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 missing space

SuggestedRemedy
 1.5 dB. Also in table 59-2, "minimum range" row.
 Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 59 SC 59.11.4 P 307 L 39 # 399
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 missing word
 SuggestedRemedy
 ...BX10 PMD is ...
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 59.11.5 P 308 L 19 # 400
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Table format
 SuggestedRemedy
 Please make left hand column wider to suit its contents
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Changes will be made

CI 59 SC 59.11.5 P 308 L 25 # 409
 Dawe, Piers Agilent
 Comment Type T Comment Status R
 Does IEC 61754-4 [B25] apply to non-SC connectors? Anyway, it has been revised since 1997. There's a 2002-3 edition. Comment applies to 59.12.3.9 LPC2 also.
 SuggestedRemedy
 Discuss. May leave a fix to next time.
 Proposed Response Response Status C
 REJECT. The commenter is encouraged to re-submit at a later stage if it is clear that the reference needs to be changed

CI 59 SC 59.12.2.2 P 310 L 40 # 402
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Wrong standard, optimistic year: see identification above.
 SuggestedRemedy
 802.3ah-200x
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. change line 48 to read "...IEEE 802.3ah 200x.)"

CI 59 SC 59.12.2.2 P 310 L 41 # 401
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 Identification needs to track title
 SuggestedRemedy
 Delete "baseband".
 Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made

CI 59 SC 59.12.2.3 P 311 L 17 # 285
 Dawe, Piers Agilent
 Comment Type E Comment Status A attn
 This text even as revised is still problematical:
 "Device supports downstream wavelength (1500 nm) over a single-mode fiber" because it supports the other wavelength equally much: one transmit, one receive. Middle of wavelength band is 1490 not 1500.
 SuggestedRemedy
 Maybe "Device operates with one single single-mode fiber and transmits at downstream wavelength (1490 nm)"? Likewise for BU.
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 59.12.3 P 311 L 5 # 403
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 Should there be a * before MD?
 SuggestedRemedy
 Check (all three clauses)
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

This will be checked and changed if appropriate

P802.3ah Draft 1.732 Comments

CI 59 SC 59.12.3.5 P 315 L 19 # 405

Dawe, Piers Agilent

Comment Type E Comment Status A scope

OM10 will need revision following 59.9.12

SuggestedRemedy

At minimum, delete "while sampling at the eye center".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Discuss remedy in Ottawa.

CI 59 SC 59.12.3.5 P 315 L 6 # 404

Dawe, Piers Agilent

Comment Type E Comment Status A scope

OM6 will need revision following 59.9.8

SuggestedRemedy

per comment

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Changes will be made as appropriate

CI 59 SC 59.12.3.6 P 316 L 13 # 406

Dawe, Piers Agilent

Comment Type E Comment Status A

ES4 needs bringing in line with 59.10.5

SuggestedRemedy

Add "N/A" check box as alternative to "Yes".

Proposed Response Response Status C

ACCEPT.

CI 59 SC 59.12.3.7 P 317 L 5 # 407

Dawe, Piers Agilent

Comment Type E Comment Status A

Blanks to be filled in

SuggestedRemedy

Suggest copy another clause

Proposed Response Response Status C

ACCEPT. Copy Clause 58.

CI 59 SC 59.12.3.9 P 317 L 24 # 408

Dawe, Piers Agilent

Comment Type E Comment Status A

Should reference own clause

SuggestedRemedy

Change "ref*38.11.4" to 59.11.5.

Proposed Response Response Status C

ACCEPT.

CI 59 SC 59.12.3.9 P 317 L 32 # 410

Dawe, Piers Agilent

Comment Type E Comment Status A

"LX" is confusing. Could change it to "LX10", but equally, could...

SuggestedRemedy

delete it.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Delete "LX"

CI 59 SC 59.4.2 P 293 L 37 # 286

Dawe, Piers Agilent

Comment Type E Comment Status A

Typo in table 59-8 100BASE-LX10 Rx sensitivity?

SuggestedRemedy

Should "-19" be "-19.2" as in previous draft?

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Table 59-8 is the wrong Table - see comment #86

P802.3ah Draft 1.732 Comments

CI 59 SC 59.4.2 P 293 L 38 # 394
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 BER spec (visible in "plain" pdf file) is max not min.
 SuggestedRemedy
 Change min to max. Check all receiver tables in all three clauses.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Is this a mistake in all Clauses?

CI 59 SC 59.6 P 296 L 12 # 287
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 Unnecessary line feed or similar in two rows of table 59-11
 SuggestedRemedy
 Remove line feed after "dB", twice.
 Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Changes will be made as appropriate

CI 59 SC 59.6 P 296 L 3 # 288
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 Table 59-11 is, I think, now the only place where "U" comes before "D".
 SuggestedRemedy
 Consider swapping the two columns - or leave to WG ballot.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Need to check the document. Changes will be made if appropriate
 Discuss in Ottawa

CI 59 SC 59.8 P 297 L 8 # 289
 Dawe, Piers Agilent
 Comment Type T Comment Status A
 Filling gaps in the table. Only one of these numbers (TJ at TP2) is a technical comment (and may need to be revised), all the other values are as is or found by simple arithmetic.
 SuggestedRemedy

TP1	0.240	192	0.100	80
TP1 to TP2	0.241	193	0.150	120
TP2	0.481	385	0.250	200
TP2 to TP3	0.029	23	0	0
TP3	0.510	408	0.250	200
TP3 to TP4	0.332	266	0.212	170
TP4	0.749	499	0.462	370

 Add footnote to TP2 "Total jitter at TP2 may be different for the two directions".
 Proposed Response Response Status C
 ACCEPT. Changes will be made

CI 59 SC 59.9 P 297 L 54 # 392
 Dawe, Piers Agilent
 Comment Type T Comment Status A
 There's a contradiction between Table 59-14 which says that the jitter pattern test frame is recommended for all jitter tests, and other places which refer to 36A:
 59.9.13 p302 line 50
 59.9.14 p303 line 28
 SuggestedRemedy
 Remove contradiction.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. The jitter patterns used will be frame based i.e. those defined in CI 59

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CI 59 SC 59.9.11 P 302 L 35 # 391

Dawe, Piers Agilent

Comment Type E Comment Status A scope
upper case

SuggestedRemedy
Meeting

Proposed Response Response Status C

ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Please note: The text presented here is different than that provided by the Clause 59 editor. This error is not present in the original text.

CI 59 SC 59.9.12 P 302 L 41 # 393

Dawe, Piers Agilent

Comment Type T Comment Status A scope

This statement "The receive sensitivity shall be measured using a worst-case extinction ratio penalty while sampling at the eye center." is not correct: we sorted it out elsewhere and need to propagate the change across clauses. The easiest way is by reference. Note that 58.8.10 says it applies to 59 also. Also we need to tie in the changes for frame based pattern and pick up the BER entry in the receive tables. I have submitted an equivalent comment against 60.9.11.

SuggestedRemedy

Change first sentence to "Receiver sensitivity is defined for the random pattern test frame and an ideal input signal quality with the specified extinction ratio. The measurement procedure is described in 58.8.10. The sensitivity shall be met for the bit error ratio defined in Table 59-8 or 59-10 as appropriate." Keep second sentence as it is.

Proposed Response Response Status C

ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made according to suggested remedy

CI 59 SC 59.9.13 P 302 L 54 # 395

Dawe, Piers Agilent

Comment Type E Comment Status A scope
PMD's name

SuggestedRemedy
-BX10. Also in 59.9.16 item b).

Proposed Response Response Status C

ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made

CI 59 SC 59.9.15 P 303 L 36 # 396

Dawe, Piers Agilent

Comment Type E Comment Status A scope

Stressed receiver conformance test is optional in the receiver tables. Last time, in clause 58 we changed it from informative to normative but optional: we should do so here too. I have submitted a similar comment against 60.9.12.

SuggestedRemedy

Delete "(informative)".
Change sentence beginning "The conformance test signal is" to:
"The conformance test signal uses the random pattern test frame and is conditioned by applying deterministic jitter and intersymbol interference."

Change text to use a "shall", e.g. change the sentence beginning "Receiver sensitivity is assured" to:

"If the option for stressed receiver compliance is chosen, the receiver shall meet the specified bit error ratio at the power level and signal quality defined in Table 59-8 or 59-10 as appropriate, according to the measurement procedures of 58.8.11 *ref*."

Add a PICS.

Proposed Response Response Status C

ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made

P802.3ah Draft 1.732 Comments

CI 59 SC 59.9.16 P 303 L 53 # 397
 Dawe, Piers Agilent
 Comment Type T Comment Status A scope
 Wrong pattern? Or do we allow either?
 SuggestedRemedy
 Change "short continuous random test pattern defined in 36A.5." to "Random Pattern Test Frame defined in 59.9.1."
 Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 Change will be made according to suggested remedy

CI 59 SC 59.9.2 P 298 L 8 # 290
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Missing word? Also, a fixed pattern is not random, just pretending to be.
 SuggestedRemedy
 "The first emulates a random pattern, with broad"
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 59.9.2 P 299 L 3 # 293
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Table format
 SuggestedRemedy
 Please make right hand column wider to suit its title
 Proposed Response Response Status C
 ACCEPT. Change will be made

CI 59 SC 59.9.3 P 298 L 42 # 291
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Wrong font within NOTE 1
 SuggestedRemedy
 per comment
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. This was correct in the submitted version (I believe).

CI 59 SC 59.9.3 P 298 L 54 # 292
 Dawe, Piers Agilent
 Comment Type E Comment Status A scope
 Broken quantity
 SuggestedRemedy
 Need a nonbreaking space between 2 and dB. Also in 59.9.5 p300 line 44, "-20 dB"
 Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 Change will be made

CI 59 SC 59.9.5 P 300 L 45 # 294
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 The new sentence displaces the following "This".
 SuggestedRemedy
 Move the new sentence to the end of the paragraph.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Discuss remedy in Ottawa.

P802.3ah Draft 1.732 Comments

CI 59 SC 59.9.8 P 301 L 10 # 295
 Dawe, Piers Agilent
 Comment Type T Comment Status A RIN
 In comment 780 to D1.414 we resolved to use RIN12OMA. This subclause has to change now.
 SuggestedRemedy
 "59.9.8 Relative intensity noise optical modulation amplitude (RIN12OMA)
 RIN12OMA is the ratio of noise to modulated optical signal in the presence of a back reflection. The measurement procedure is described in *ref*58.8.7."
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 59.9.9 P 301 L 18 # 296
 Dawe, Piers Agilent
 Comment Type T Comment Status A scope
 This comment uses references to 58.8.8 to bring the clauses into line instead of cloning that material. First paragraph and figure remain unchanged. Also, spelling: "surpress".
 SuggestedRemedy
 "The required transmitter pulse shape characteristics are specified in the form of a mask of the transmitter eye diagram as shown in Figure 59-4.
 The measurement procedure is described in 58.8.8 and references therein.
 The eye shall comply to the mask of the eye using a fourth-order Bessel Thomson receiver response with $f_r = 0.9375$ GHz, and where the relative response vs. relative frequency is defined in ITU-T G.957, Table B.2 (STM-16 values), along with the allowed tolerances for its physical implementation.
 NOTE - The fourth order Bessel Thomson filter is reactive. In order to suppress reflections, a 6 dB attenuator may be required at the filter input and/or output."
 Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made according to suggested remedy

CI 59 SC 7 P 296 L 26 # 87
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Comment resolution not correctly implemented
 SuggestedRemedy
 Replace "Numbers in the..." with "The entries in..."
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 8 P 296 L 52 # 88
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Comment resolution not correctly implemented
 SuggestedRemedy
 Replace "Numbers in the..." with "The entries in..."
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 9 P 297 L 26 # 89
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Comment resolution not correctly implemented
 SuggestedRemedy
 Replace "All optical measurements except TDP and RIN shall..." with "All optical measurements, except TDP and RIN, shall..."
 Proposed Response Response Status C
 ACCEPT.

P802.3ah Draft 1.732 Comments

CI 59 SC 9 P 297 L 28 # 90
 Swanson, Steve Corning Incorporated
 Comment Type TR Comment Status A
 Missing paragraph
 SuggestedRemedy
 Add paragraph in original submittal: "The following sections describe definitive patterns and test procedures for certain PMDs of this standard. Implementers using alternative verification methods must ensure adequate correlation and allow adequate margin such that specifications are met by reference to the definitive methods."
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 9.2 P 297 L 31 # 91
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Incorrect header
 SuggestedRemedy
 "59.9.2 Test patterns" should read "59.9.1 Test patterns"
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 9.2 P 298 L 5 # 92
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Incorrect format
 SuggestedRemedy
 Add hard space to keep reference to Table 59-15 on a single line.
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC 9.3 P 300 L 33 # 93
 Swanson, Steve Corning Incorporated
 Comment Type E Comment Status A
 Editing error
 SuggestedRemedy
 Delete "Optical power measurements"
 Proposed Response Response Status C
 ACCEPT.

CI 59 SC Table 59-15 P 298 L 16 # 137
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A scope
 Two fields are incorrect.
 SuggestedRemedy
 The field "Idle" should be relabeled "Preamble".
 The field "SOF" should be re-labeled "SFD".
 Table 58-8 also contains a line item for Idle, properly called IPG. Should this also be included in Table 59-15.
 Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 Change will be made if appropriate

CI 60 SC P 319 L 1 # 70
 Bhatt, Vipul Individual
 Comment Type E Comment Status A diff errors
 The DIFF version and the PLAIN version are mismatched in several locations where the PLAIN version is correct, and the DIFF version is incorrect.
 SuggestedRemedy
 Make the corrections.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

CI 60 SC 5 P 330 L 1 # 63
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Table 60-7 is a false duplicate, i.e., it is incorrect and unnecessary. The PX10 Rx characteristics are specified in Table 60-8, making 60-7 unnecessary and obsolete. Please note that in the PLAIN version, Table 60-10 appears to be a false duplicate of Table 60-7.
 SuggestedRemedy
 Delete Table 60-7 and make sure references to Table 60-8 are correct everywhere in the document.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. See also comments #63 and #536

P802.3ah Draft 1.732 Comments

CI 60 SC 60 P 326 L 3 # 417
 Dawe, Piers Agilent

Comment Type E Comment Status A attn
 Several tables in this clause would benefit from wider or resized columns.

SuggestedRemedy
 and I think it won't show as a change (not in Frame, anyway)

Proposed Response Response Status C
 ACCEPT. Changes will be made as appropriate

CI 60 SC 60.1 P 320 L 12 # 420
 Dawe, Piers Agilent

Comment Type E Comment Status A
 Need to fess up to extra PMA specs in 65.

SuggestedRemedy
 "... and PMA of Clause 36 *ref* as modified by 65.3, and ..."

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Make change with 65.3 *ref*

CI 60 SC 60.1 P 320 L 22 # 138
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 Length is misspelled.

SuggestedRemedy
 Fix.

Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.1.1 P 320 L 4344 # 233
 Yajima, Yusuke Hitachi Communication

Comment Type E Comment Status A attn
 The notation "...fiber suppoting a downstream:upstream ratio of 1:16" is not appropriate. It is not clear what ratio "1:16" shows.

SuggestedRemedy
 The notation should be changed into "...fiber with a typical sprit ratio of 1:16" or similar expression.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

CI 60 SC 60.1.5 P 322 L 35 # 229
 Yokomoto, Tetsuya FUJITSU ACCESS LIM I

Comment Type T Comment Status A delay
 Q1.

Is '4ns' reserved for each transmit/receive functions of the PMD an independent specification, or is it just an assumed value in determining delay requirement from the MDI to the GMII?

Q2.
 What is the rationale for '4ns' ?

This value is a little small to employ pigtailed optical transceivers. Therefore, it should be relaxed to 10-20ns, which is small enough compared to the delay within ODN, and large enough for most of the transceivers with pigtail fiber.

SuggestedRemedy
 1) If this value(4ns) is an independent spec, Relax the delay to 20ns.
 2) If this value is implementation dependent, omit specific value.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change sentence to "Of the budget, up to 12 ns is reserved for each of the transmit and receive functions of the PMD to account for those cases where the PMD includes a pigtail."

Common to all clauses

CI 60 SC 60.10.4 P 346 L 25 # 213
 Nakagawa, Junichi Mitsubishi Electric Cor

Comment Type T Comment Status R temperature
 The Subclause refers Annex 66A, which is informative. It should be clearly indicated that Subcluase 60.10.4 is informative like as Annex 66A.

SuggestedRemedy
 Change the title "Environment" to "Environment (informative)", or change "Table 60-16 Component case temperature classes" to "Table 60-16 Component case temperature classes (informative)"

Proposed Response Response Status C
 REJECT.

The wording of this section (and its normative nature) is the result of various motions passed on temperature issues.

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CI 60 SC 60.10.4 P 346 L 29 # 231
 Yokomoto, Tetsuya FUJITSU ACCESS LIMI

Comment Type T Comment Status R temperature

Reference for two optional temperature ranges is not adequate.
 Necessary component case temperature is heavily implementation dependent.
 It may be useful to state options for equipment operating temperature, but not to state component case temperature. Therefore, line from 29 to 31 and Table 60-17 should be deleted from 60.10.4. or subclause 60.10.4 should be stated as 'informative'.

SuggestedRemedy

There are two alternatives.
 1)Clearly state that this subclause is informative, and change reference from Table 58-15 to Table 60-17
 Or,
 2)Delete line from 29 to 31 and Table 60-17.

Proposed Response Response Status C

REJECT. The wording of this text and the case temperature definition has been agreed upon by motions of previous meetings and will not be changed.

CI 60 SC 60.12.2.2 P 350 L 4 # 418
 Dawe, Piers Agilent

Comment Type E Comment Status A
 clause number

SuggestedRemedy

60. Also at 60.12.1 p349 line 7.

Proposed Response Response Status C

ACCEPT.

CI 60 SC 60.12.4 P 352 L 1 # 419
 Dawe, Piers Agilent

Comment Type E Comment Status A
 obsolete title

SuggestedRemedy

revise to follow clause title

Proposed Response Response Status C

ACCEPT.

CI 60 SC 60.3.1 P 324 L 33 # 415
 Dawe, Piers Agilent

Comment Type E Comment Status A

I thought we had got these test points sorted but to be strictly correct we have to make the diagram even more busy!

SuggestedRemedy

Where patch cord meets OLT PMD, label "/TP3".
 Change "TP2/TP3" to "TP2/-".
 Introduce patchcords and connectors on right hand side. Label one connector "-/TP2".
 Where new patch cord meets ONU PMD, label "TP3/-".

Proposed Response Response Status C

ACCEPT.

CI 60 SC 60.4 P 326 L 29 # 186
 Ryuji, Ishii Hitachi Communication

Comment Type E Comment Status A
 Referred subclause "58.10.3" is incorrect.

SuggestedRemedy

Change "58.10.3" to "60.11.2".

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 60 SC 60.4 P 327 L 37 # 243
 David Li Ligent Photonics, Inc.

Comment Type T Comment Status R power level

For the 1000Base-PX10 and 1000Base-PX20 transceivers, the receiver sensitivity is defined as -24dBm (-27dBm for 1000Base-PX20-D) in draft D1.732. The -24dBm sensitivity at 1.25Gbps by using a PIN photo diode is achievable in the lab, but it is very difficult to guarantee in the volume production. This will force the transceiver manufacturers to use the APDs on the receiver side in addition to the high power laser diodes on the transmitters.

See also p.327 line 38, p.330 line 12, p.332 line11 and 12, p.336 line 14

SuggestedRemedy

It is better to change the receiver sensitivity spec. to -28dBm by using the APD and relax the transmitting power spec. by 4dB in order to reduce the cost of laser diodes and also the power dissipation of the P2MP transceivers. The suggested modification and cost information is summarized in li_cmt_1_0603.pdf.

Proposed Response Response Status C

REJECT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The current specifications are viewed by the group as the most effective

CI 60 SC 60.4.2 P 330 L 1 # 242
 David Li Ligent Photonics, Inc.

Comment Type E Comment Status A

Table 60-7 was duplicated in Table 60-8 and Table 60-11.

See also pg 331 line 1, pg 334 line 29

SuggestedRemedy

Delete Table 60-8 and Table 60-11.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. See comments #63 and #536

CI 60 SC 60.4.2 P 330 L 1 # 536
 Onishi, Kazumi O F Networks Co., Ltd

Comment Type E Comment Status A

Table 60-7, Table 60-8 and Table 60-11 are duplicate.

SuggestedRemedy

Delete Table 60-7 and Table 60-11.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. See also #63 and #536

CI 60 SC 60.4.2 P 331 L 1 # 539
 Onishi, Kazumi O F Networks Co., Ltd

Comment Type T Comment Status A signal detect

In Table 60-8, regarding Signal Detect Threshold(min), the PX10-D value and the PX10-U value may be swapped, because the PX10-U value "-45dBm" is inconsistent with PX10-D maximum average launch power of OFF transmitter "-39dBm" and minimum channel insertion loss "5dB".

To be harmonized with PX10, the PX20-D value and the PX20-U value may be swapped in Table 60-12.

SuggestedRemedy

Signal Detect Threshold(min) are:
 1000BASE-PX10-D=-45dBm, 1000BASE-PX10-U=-44dBm in table60-8
 1000BASE-PX20-D=-45dBm, 1000BASE-PX20-U=-44dBm in table60-12

Proposed Response Response Status C

ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change values per suggested remedy

P802.3ah Draft 1.732 Comments

CI 60 SC 60.4.2 P 331 L 1 # 538
 Onishi, Kazumi O F Networks Co., Ltd

Comment Type T Comment Status A power level
 In Table 60-8, PX10-U Average receive power(max) "-5dBm" is inconsistent with PX10-D maximum average launch power "+2dBm" and minimum channel insertion loss "5dB".

SuggestedRemedy
 In Table 60-8, PX-10-U Average receive power(max) value is replaced with "-3dBm".

Proposed Response Response Status C
 ACCEPT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Change will be made

CI 60 SC 60.4.2, 60.5.2 P 331336 L # 234
 Yajima, Yusuke Hitachi Communication

Comment Type E Comment Status A attn
 There are no definitions of "Rx settling time" mentioned in note c in Table 60-8 and Table 60-12. I guess that "Rx settling time" is same as "Treceiver_settling". Supposing that is right, is it right that note c mentions that only the sum total time of "Treceiver_settling" and "CDR lock time" is normative and the value of each time is just informative although "CDR lock time" is specified as "less than 500bit times" in 65.3 ? Does that mean only "Treceiver_settling" is informative and "CDR lock time" and sum total time of "Treceiver_settling" and "CDR lock time" are normative?

SuggestedRemedy
 Change "Rx settling time" into "Treceiver_settling" in note c of Table 60-8 and Table 60-12 and clarify the meaning of note c to consistent with 65.3.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. In the note Rx settling time will be changed to Treceiver_settling.

CI 60 SC 60.5 P 329 L 47 # 187
 Ryuji, Ishii Hitachi Communication

Comment Type E Comment Status A
 Referred subclause "58.10.3" is incorrect.

SuggestedRemedy
 Change "58.10.3" to "60.11.2".

Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.5 P 329 L 47 # 497
 TSUJI, SHINJI SUMITOMO ELECTRIC

Comment Type E Comment Status A
 missing

SuggestedRemedy
 Modify "Table 58-10" into "Table 60-18".

Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.5.2 P 296 L 6 # 534
 Hyun-Kyun Choi ETRI

Comment Type E Comment Status R scope
 Those row titles are mismatched with the below contents in Table 60-10.

SuggestedRemedy
 Exchange the row title 1000BASE-PX10-D with 100BASE-PX10-U.

Proposed Response Response Status C
 REJECT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The -D and -U indicates transmit direction, not receive. Hence title is correct

CI 60 SC 60.5.2 P 297 L 27 # 535
 Hyun-Kyun Choi ETRI

Comment Type E Comment Status R scope
 Those row titles are mismatched with the below contents in Table 60-11.

SuggestedRemedy
 Exchange the row title 1000BASE-PX20-D with 100BASE-PX20-U.

Proposed Response Response Status C
 REJECT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The -D and -U indicates transmit direction, not receive. Hence title is correct

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CI 60 SC 60.5.2 P 332 L 47 # 416
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Near-duplicate paragraphs
 SuggestedRemedy
 Delete the second one.
 Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.9 P 338 L 37 # 65
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Error in Table 60-16 title.
 SuggestedRemedy
 Change to: Jitter gain curve values for 1000BASE-PX10-U and 1000BASE-PX20-U.
 Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.5.2 P 335 L 1 # 66
 Bhatt, Vipul Individual
 Comment Type E Comment Status A
 Table 60-11 is redundant. Note that in the PLAIN version, Table 60-10 is redundant.
 SuggestedRemedy
 Delete it.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Document will be examined and appropriate action taken

CI 60 SC 60.9.11 P 341 L 43 # 412
 Dawe, Piers Agilent
 Comment Type T Comment Status A
 This statement "The receive sensitivity shall be measured using a worst-case extinction ratio penalty while sampling at the eye center." is not correct: we sorted it out elsewhere and need to propagate the change across clauses. The easiest way is by reference. Note that 58.8.10 says it applies to 60 also. Also we need to tie in the changes for frame based pattern and pick up the BER entry in the receive tables. I have submitted an equivalent comment against 59.9.12.
 SuggestedRemedy
 Change first sentence to "Receiver sensitivity is defined for the random pattern test frame and an ideal input signal quality with the specified extinction ratio. The measurement procedure is described in 58.8.10. The sensitivity shall be met for the bit error ratio defined in Table 60-? or 60-? as appropriate." Keep second sentence as it is.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Changes will be made with the relevant references. Change 58.8.10 to *ref* 58.8.10

CI 60 SC 60.7 P 337 L 29 # 498
 TSUJI, SHINJI SUMITOMO ELECTRIC
 Comment Type E Comment Status A
 missing
 SuggestedRemedy
 Modify "58.8.1" into "60.9.2".
 Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.9.11 P 341 L 46 # 413
 Dawe, Piers Agilent
 Comment Type E Comment Status A
 Redundant paragraph
 SuggestedRemedy
 Delete the paragraph: it duplicates the following subclause.
 Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.7 P 338 L 26 # 202
 Nojima, Kazuhiro Panasonic Mobile
 Comment Type E Comment Status A
 Editorial mistake.
 SuggestedRemedy
 Change "01.6" into "0.16"
 Proposed Response Response Status C
 ACCEPT.

P802.3ah Draft 1.732 Comments

CI 60 SC 60.9.12 P 341 L 52 # 414
 Dawe, Piers Agilent

Comment Type E Comment Status A

Stressed receiver conformance test is optional in the receiver tables. Last time, in clause 58 we changed it from informative to normative but optional: we should do so here too. I have submitted a similar comment against 59.9.15.

SuggestedRemedy

Delete "(informative)".
 Change sentence beginning "The conformance test signal is" to:
 "The conformance test signal uses the random pattern test frame and is conditioned by applying deterministic jitter and intersymbol interference."

Change text to use a "shall", e.g. change the sentence beginning "Receiver sensitivity is assured" to:
 "If the option for stressed receiver compliance is chosen, the receiver shall meet the specified bit error ratio at the power level and signal quality defined in Table 60-8 or 60-12 as appropriate, according to the measurement procedures of 58.8.11 *ref*."
 Add a PICS.

Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.9.15 P L # 67
 Bhatt, Vipul Individual

Comment Type E Comment Status A

Subclause numbers don't match the PLAIN version. See, for example, 60.9.15 (DIFF) and 60.8.13 (PLAIN).

SuggestedRemedy

Fix the subclause numbers.

Proposed Response Response Status C
 ACCEPT.

CI 60 SC 60.9.15.1.1 P 342 L 37 # 499
 TSUJI, SHINJI SUMITOMO ELECTRIC

Comment Type E Comment Status A attn

It is not clear how 8 parameters(wavelength, and eye mask opening) are used.

SuggestedRemedy

Write parameters separately,
 for evaluating,
 for conditioning.

Add average launch power to the text and/or change the measurement setup(Figure 60-8) if necessary.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. Launched power will be added to the list. The fact that the test refers to a single parameter is stated in 60.8.13.1.2

CI 60 SC 60.9.15.3.2 P 345 L 2 # 537
 Onishi, Kazumi O F Networks Co., Ltd

Comment Type E Comment Status A

In Figure 60-9, some box names may be wrong according to their functions.
 At the lower left, the box that has "Tx_Enable2" input may not be "Tested" Optical PMD Transmitter.
 At the upper right, the box between TP3 and TP4 may not be "Transmitter".

SuggestedRemedy

Two box names should be replaced as follows.
 At the lower left, the box that has "Tx_Enable2" input: The name "Tested Optical PMD Transmitter" is replaced with "Optical PMD Transmitter".
 At the upper right, the box between TP3 and TP4: The name "Tested Optical PMD Transmitter" is replaced with "Tested Optical PMD Receiver".

Proposed Response Response Status C
 ACCEPT.

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CI 60 SC 60.9.2 P 339 L 33 # 230
 Yokomoto, Tetsuya FUJITSU ACCESS LIMI

Comment Type E Comment Status A attn

Multiplication factor 10^{-3} is missing from equation (60-3).
 Add 10^{-3} and units of parameters to the equation for clarity.

SuggestedRemedy

Modify expressions in both line 31 and equation (60-3) as follows.

1)
 $\epsilon = \text{dispersion}[\text{ps/nm/km}] * \text{path length}[\text{km}] * \text{RMS_spectral width}[\text{nm}]$
 $* \text{signaling_speed}[\text{Gbd/s}] * 10^{-3}$ (60-3)

2)Add ", where the path dispersion[ps/nm] is the product of the dispersion[ps/nm/km] and the path length[km]." to the end of line 31.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The 10^{-3} will be added to equation 60-3. Same change for CI 59.

Note that dispersion is distinct from dispersion per unit distance

CI 60 SC 60.9.2 P 339 L 35 # 241
 Yanagisawa, Hiroki NEC Corporation

Comment Type T Comment Status R Epsilon

It seems strange that the same epsilon value is applied to upstream and downstream, while the allocation for penalties are different from each other. Current epsilon values (0.168, 0.115 and 0.10) seem to be applicable to upstream only.

SuggestedRemedy

Define appropriate epsilon value for downstream:
 PX10-D: Normative epsilon may be between 0.115 and 0.100 for 1.5 dB penalty
 PX20-D: Normative epsilon may be between 0.168 and 0.115 for 2.5 dB penalty

Modify spectral limits for 1480-1500 nm in Table 60-6 and Table 60-10 accordingly.

Proposed Response Response Status C

REJECT. The editor believes that there is no discrepancy in the epsilon values and allocated penalties for the downstream link.

The allocations are intended to cover combined transmission penalties and are therefore not a function of epsilon alone.

CI 60 SC Figure 60-1 P 321 L 9 # 121
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

"MPCP" sublayer should really be "MPMC".

SuggestedRemedy

Fix. Two places.

Proposed Response Response Status C

ACCEPT.

CI 60 SC Table 60-13 P 337 L 8 # 139
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The spelling of "fiber" is different than in the corresponding tables in 58 and 59.

SuggestedRemedy

Change to "fiber" in two places in table.

Proposed Response Response Status C

ACCEPT.

CI 60 SC Table 60-12 P 336 L 22 # 240
 Yanagisawa, Hiroki NEC Corporation

Comment Type T Comment Status A stressed sensitivity

It is not clear how the stressed receive sensitivity is derived. It seems to be inconsistent with the vertical eye-closure penalty. At this point, difference between stressed sensitivity and un-stressed sensitivity should be equal to the vertical eye-closure penalty, as same as 100BASE-LX10 and 100BASE-BX10.

SuggestedRemedy

Modify the stressed receive sensitivity from -26.2 to -24.8 dBm for PX20-D. Modify the stressed receive sensitivity from -23.1 to -22.5 dBm for PX20-U. Stressed OMA should be modified accordingly.

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 60 SC Table 60-5 P 328 L 20 # 237
 Yanagisawa, Hiroki NEC Corporation
 Comment Type T Comment Status R TDP
 It is not clear why there is 0.2 dB discrepancy between TDP and allocation for penalties in Table 60-13.
 SuggestedRemedy
 Modify TDP from 1.3 to 1.5 dB for PX10-D
 Modify TDP from 2.8 to 3.0 dB for PX10-U
 Proposed Response Response Status C
 REJECT. The 0.2 dB allowance is intended for penalties arising from the interaction between Tx and Rx and are not exclusively attributable to either

CI 60 SC Table 60-5 P 328 L 7 # 235
 Yanagisawa, Hiroki NEC Corporation
 Comment Type T Comment Status A RIN
 In terms of RINxOMA, x should be 15 instead of 12. Because optical return loss tolerance is 15 dB.
 SuggestedRemedy
 Modify RIN_12_OMA to RIN_15_OMA.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. See 203

CI 60 SC Table 60-8 P 331 L 22 # 239
 Yanagisawa, Hiroki NEC Corporation
 Comment Type T Comment Status A stressed sensitivity
 It is not clear how the stressed receive sensitivity is derived. It seems to be inconsistent with the vertical eye-closure penalty. At this point, difference between stressed sensitivity and un-stressed sensitivity should be equal to the vertical eye-closure penalty, as same as 100BASE-LX10 and 100BASE-BX10.
 SuggestedRemedy
 Modify the stressed receive sensitivity from -23.0 to -22.8 dBm for PX10-D. Modify the stressed receive sensitivity from -23.2 to -21.8 dBm for PX10-U. Stressed OMA should be modified accordingly.
 Proposed Response Response Status C
 ACCEPT.

CI 60 SC Table 60-8 P 331 L 32 # 207
 Nakagawa, Junichi Mitsubishi Electric Cor
 Comment Type T Comment Status R jitter
 Jitter corner frequency should be clearly indicated as a test condition for measuring stressed receiver sensitivity.
 SuggestedRemedy
 Change "Jitter corner frequency " to "Jitter corner frequency (b)". Put a footnote -b.
 Proposed Response Response Status C
 REJECT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 The existing Footnote b already serves this purpose

CI 60 SC Table 60-9 P 332 L 17 # 236
 Yanagisawa, Hiroki NEC Corporation
 Comment Type T Comment Status A RIN
 In terms of RINxOMA, x should be 15 instead of 12. Because optical return loss tolerance is 15 dB.
 SuggestedRemedy
 Modify RIN_12_OMA to RIN_15_OMA.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. See 203

CI 60 SC Table 60-9 P 332 L 31 # 238
 Yanagisawa, Hiroki NEC Corporation
 Comment Type T Comment Status R TDP
 It is not clear why there is 0.2 dB discrepancy between TDP and allocation for penalties in Table 60-13.
 SuggestedRemedy
 Modify TDP from 2.3 to 2.5 dB for PX20-D
 Modify TDP from 1.8 to 2.0 dB for PX20-U
 Proposed Response Response Status C
 REJECT. The 0.2 dB allowance is intended for penalties arising from the interaction between Tx and Rx and are not exclusively attributable to either

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CI 60 SC Table60-12 P 336 L 24 # 209
 Nakagawa, Junichi Mitsubishi Electric Cor
 Comment Type T Comment Status R stressed sensitivity
 Stressed receiver sensitivity OMA should be clearly indicated as informative like as Strressed receiver sensitivity.
 SuggestedRemedy
 Change "Stressed receiver sensitivity OMA" to "Stressed receiver sensitivity OMA(a)".
 Put a footnote -a.
 Proposed Response Response Status C
 REJECT. See comment 204

CI 60 SC Table60-12 P 336 L 30 # 210
 Nakagawa, Junichi Mitsubishi Electric Cor
 Comment Type T Comment Status R jitter
 Stressed eye jitter should be clearly indicated as a test condition for measuring stressed receiver sensitivity.
 SuggestedRemedy
 Change "Stressed eye jitter" to "Stressed eye jitter (b)". Put a footnote -b.
 Proposed Response Response Status C
 REJECT. See comment 207

CI 60 SC Table60-12 P 336 L 32 # 211
 Nakagawa, Junichi Mitsubishi Electric Cor
 Comment Type T Comment Status R jitter
 Jitter corner frequency should be clearly indicated as a test condition for measuring stressed receiver sensitivity.
 SuggestedRemedy
 Change "Jitter corner frequency " to "Jitter corner frequency (b)". Put a footnote -b.
 Proposed Response Response Status C
 REJECT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.
 See 207

CI 60 SC Table60-12 P 336 L 33 # 212
 Nakagawa, Junichi Mitsubishi Electric Cor
 Comment Type T Comment Status R jitter
 Sinusoidal jitter limits for stressed receiver conformance test should be clearly indicated as a test condition for measuring stressed receiver sensitivity.
 SuggestedRemedy
 Change "Sinusoidal jitter limits for stressed receiver conformance test " to "Sinusoidal jitter lmnits for stressed receiver conformance test (b)". Put a footnote -b.
 Proposed Response Response Status C
 REJECT. See comment 207

CI 60 SC Table60-5 P 328 L 7 # 203
 Nakagawa, Junichi Mitsubishi Electric Cor
 Comment Type T Comment Status A RIN
 RINxOMA should be defined at the condition of the optical return loss tolerance of 15dB, not 12dB.
 The optical retuen loss of 12dB is that of the optical transceiver.
 SuggestedRemedy
 Change RIN_12_OMA to RIN_15_OMA.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE. The parameter will be renamed from RIN_12_OMA to RIN_15_OMA.
 Change heading of 58.8.7 to RIN_x_OMA.

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CI 60 SC Table60-8 P 331 L 24 # 204
 Nakagawa, Junichi Mitsubishi Electric Cor

Comment Type T Comment Status R oma

Stressed receiver sensitivity OMA should be clearly indicated as informative like as Stressed receiver sensitivity.

SuggestedRemedy

Change "Stressed receiver sensitivity OMA" to "Stressed receiver sensitivity OMA(a)". Put a footnote -a.

Proposed Response Response Status C

REJECT. Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The OMA values are derived from the Stressed receiver sensitivity values which are optimal, hence, the OMA values are per definition optional

CI 60 SC Table60-8 P 331 L 30 # 206
 Nakagawa, Junichi Mitsubishi Electric Cor

Comment Type T Comment Status R jitter

Stressed eye jitter should be clearly indicated as a test condition for measuring stressed receiver sensitivity.

SuggestedRemedy

Change "Stressed eye jitter" to "Stressed eye jitter (b)". Put a footnote -b.

Proposed Response Response Status C

REJECT. See comment 207

CI 60 SC Table60-8 P 331 L 33 # 208
 Nakagawa, Junichi Mitsubishi Electric Cor

Comment Type T Comment Status R jitter

Sinusoidal jitter limits for stressed receiver conformance test should be clearly indicated as a test condition for measuring stressed receiver sensitivity.

SuggestedRemedy

Change "Sinusoidal jitter limits for stressed receiver conformance test " to "Sinusoidal jitter limits for stressed receiver conformance test (b)". Put a footnote -b.

Proposed Response Response Status C

REJECT. See comment 207

CI 60 SC Table60-9 P 332 L 17 # 205
 Nakagawa, Junichi Mitsubishi Electric Cor

Comment Type T Comment Status A RIN

RINxOMA should be defined at the condition of the optical return loss tolerance of 15dB, not 12dB.

The optical return loss of 12dB is that of the optical transceiver.

SuggestedRemedy

Change RIN_12_OMA to RIN_15_OMA.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. See 203

CI 61 SC 61 P 356 L 1 # 225
 Tom Mathey Independent

Comment Type T Comment Status A

Clause 45 has added 3.x.15:0 in 45.7.3.17 for coding violation counter. Clause 61 needs to define what a coding violation error is such that this counter can be incremented.

SuggestedRemedy

Add definition of coding violation to Clause 61.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Codeword violations are

-invalid received values of C_n;

-wrong byte received when F0 or 0F expected

P802.3ah Draft 1.732 Comments

CI 61 SC 61.1 P 356 L 38 # 216
 Tom Mathey Independent

Comment Type T Comment Status R

Clause 61 is incorrect about desired ability to support Clause 57 uni-directional links.

Text in "57.1.2 Summary of objectives and major concepts" states:
 Subscriber access physical layer devices, defined in Clauses 58, 59, 60, 62 and 63 support unidirectional operation to allow OAM remote fault indication during fault conditions (See Table 57-7)conditions.

Text in "Clause 56.1.4 Management" states:
 OAM, as defined in Clause 57, includes a mechanism for communicating management information using OAM frames, as well as functions for performing low level diagnostics on a per link basis in an Ethernet subscriber access network.

For clause 62, 63 to support unidirectional operation, then the clause 61 needs to support.

SuggestedRemedy

Add text to support uni-directional links. One of the main reasons for Clause 57 OAM is its intended use by all copper media, an Ethernet subscriber access network.

Proposed Response Response Status C

REJECT.
 PHYs defined in Clause 62 and 63 do not support unidirectional operation. This is an erroneous assumption of Clause 57.
 See also resolution of comment #884/D1.414.

CI 61 SC 61.1.4.1.1 P 359 L 39 # 218
 Tom Mathey Independent

Comment Type T Comment Status A

1. Line 39 references 5.2.2.1.20. However, IEEE Std 802.3-2002, Section One, Page 83 states:

5. Layer Management All parts of Clause 5, except for 5.2.4 and its subclasses, are deprecated by Clause 30.

2. In 5.2.4.1 Common constants and types, the constant maxDeferTime is provided values for various operating speeds. Therefore, add a line speed for EFM.

SuggestedRemedy

1. Replace (see aFramesWithExcessDeferral in 5.2.2.1.20 with: 30.3.1.1.20 aFramesWithExcessiveDeferral

2. In 5.2.4.1, add a very slow line speed. Or some way to determine the actual line speed.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Replace 5.2.2.1.20 with: 30.3.1.1.20
 There is no need to modify the maxDeferTime definition in 5.2.4.1 if we take the view that excessive deferrals are to be expected and ignored.

CI 61 SC 61.1.4.1.1 P 359 L 7 # 217
 Tom Mathey Independent

Comment Type T Comment Status R

Text on this line is specific to proposed PMD's. When additional PMD's are added to the standard as new clauses sometime in the future, then Clause 61 will have to be opened up for the single purpose of changing this line.

SuggestedRemedy

Rewrite line to be generic about PMD's.

Proposed Response Response Status C

REJECT.
 Suggested remedy not detailed enough.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.11.4.3 P 440 L 2 # 511
 Barrass, Hugh Cisco Systems

Comment Type E Comment Status A
 PICS entries should be editorial.

The PAF entries are only mandatory if PAF is supported.

SuggestedRemedy
 Add a note:

All items listed in this section are only applicable if the optional PMI Aggregation Function is supported.

Proposed Response Response Status C
 ACCEPT.

This is implied by marking PAF-2 and PAF-10 as optional in the "Major capabilities/options" table.

CI 61 SC 61.11.4.3 P 440 L 3 # 513
 Barrass, Hugh Cisco Systems

Comment Type E Comment Status A
 PICS entries should be editorial.

All the subclause numbering in this table appears to be incorrect.

SuggestedRemedy
 Regenerate subclause numbers.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Editor to create cross-references, rather than plain text subclause numbers.

CI 61 SC 61.11.4.3 P 440 L 6 # 510
 Barrass, Hugh Cisco Systems

Comment Type E Comment Status A
 PICS entries should be editorial.

PAF-1, PAF-2, PAF-3, PAF-4 are all taken from 61.1.5.4 which is an informative subclause. There are no shalls in this section.

SuggestedRemedy
 Remove PAF-1, PAF-2, PAF-3 & PAF-4.

Proposed Response Response Status C
 ACCEPT.

CI 61 SC 61.11.4.3 P 441 L 23 # 512
 Barrass, Hugh Cisco Systems

Comment Type E Comment Status A
 PICS entries should be editorial.

PAF-14 is not optional, it is mandatory but different for CO-type and CPE-type.

The same applies to PAF-16

SuggestedRemedy
 Split PAF-14 into two, one marked with status "CO:M" the other "CPE:M"

Likewise for PAF-16.

Proposed Response Response Status C
 ACCEPT.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.1 P L # 99402
 Scott Simon (Cu STF)

Comment Type T Comment Status R D1.4 #45001

The MMD register bit 3.44.15, "MII cannot TX/RX simultaneously". (default), may have an inherent, uncorrectable defect.

Consider the following case:

1. the transmit path is quiet
2. the receive path is quiet
3. there is no information available on either path that the other path is about to become active
4. within the same clock cycle or a very few number of clock cycles
 - a. the transmit path starts a frame from MAC to PHY
 - b. the receive path starts a frame from PHY to MAC
5. variable 3.44.15 is set to 0, not able to TX/RX simultaneously
6. something in the MAC breaks, and there is no way to recover as collision signal is held inactive.
7. even if collision signal is set active, it is very awkward for the phy receive path to rewind / roll-back its fifo/buffer pointer/address to start of packet.

SuggestedRemedy

Proposed Response Response Status C

REJECT.
 There is no defect. If the MAC is deferring because CRS has been asserted it will not start transmitting.
 Therefore the scenario described in the comment cannot occur.

CI 61 SC 61.2.1.3.2 P 366 L 49 # 349
 Shohet, Zion Infineon

Comment Type T Comment Status A

power on="true" there is no power.
 power on="false" when there is power.

seems to be opposit

SuggestedRemedy

modify accordingly if wrong.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 'power_on' means the device is powering up. Once full power is reached 'power_on' becomes false. The text is correct.
 Add note: "NOTE:'power_on' means the device is powering up. Once full power is reached 'power_on' becomes false"

CI 61 SC 61.2.1.3.2 P 366 L 50 # 219
 Tom Mathey Independent

Comment Type T Comment Status A

Text has introduced an entirely new feature, Low power mode, 3.0.11. This feature has not been previously discussed.

SuggestedRemedy

Delete feature "Low power mode", or justify.

Proposed Response Response Status C

ACCEPT.
 Delete the text "The condition is also true when the device has low power mode set via control register bit 3.0.11."

CI 61 SC 61.2.2.2 P 370 L 19 # 426
 O'Mahony, Barry Intel Corp.

Comment Type E Comment Status A

In figure 61-9, it is unclear that the "FCS" shown for PMI #1 and PMI #2 are, infact, the TC-CRC ('have heard from a few people confused by this).

SuggestedRemedy

Change "FCS" to "FCS (TC-CRC)" in two places in figure. Also, in the preceeding paragraph, change "A Frame Check Sequence is added..." to "A Frame Check Sequence, known as the TC-CRC, is added..."

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.2.5 P 373 L 47 # 339
 Horvat, Michael Infineon Technologies

Comment Type T Comment Status A

For 2BASE-TL the differential latency of 8k bit times not sufficient.
 If the ratio between the fastest and the slowest link is 4 to 1 16384 bits can be sent.

SuggestedRemedy

Adjust differential latency for 2BASE-TL systems to at least to 16384 bit times.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Differential latency and speed ratio are related but not entirely dependent. However, differential latency = 8000 along with speed ratio = 4 does not seem to make sense.

Propose:

Change line 46 to

a) The differential latency between any two PMIs in an aggregated group shall be no more than 15,000 bit times (maxDifferentialDelay).

Add after the end of line 50 (item d)

Note that a speed ratio of 4 may only be used if the latency is controlled to meet restriction a).

CI 61 SC 61.2.2.6 P 374 L 4 # 220
 Tom Mathey Independent

Comment Type T Comment Status R

PHY's are not allowed to discard, substitute, or otherwise change data. If the aggregation layer is not able to properly put the pieces together, then the layer should send up the pieces in some reasonable manner, mark each piece with RxERR to insure that the MAC discards, and go on. Implementators who are trying to trouble-shoot or diagnose a problem/fault will have even greater difficulty time when data is discarded. Visibility into what happened is important.

Resolution #893 to D1.4 is incorrect. Reassembly will not cause errors to be propagated when the pieces are marked with RxERR.

SuggestedRemedy

A PHY shall never drop, discard, change, modify, garbage, or replace data. If errors, send up what is available and mark with RxERR. Applies to all PCS error conditions.

Proposed Response Response Status C

REJECT.

Approve: 14 Don't Approve: 1 Abstaining: 20

For the same reasoning as used previously - if a fragment is errored there is nowhere to put it. An attempt to reassemble a frame including a broken fragment may lead to unnecessary error propagation. Attempting to forward the fragment in addition to the stream of frames may cause problems if a maximum rate data stream is flowing.

If the commenter wishes a different action then a detailed remedy must be supplied which illustrates how the above problems are overcome.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.2.7.2 P 375 L 36 # 427
 O'Mahony, Barry Intel Corp.

Comment Type T Comment Status A

The use of the term "primitive" in the manner used in this subclause should be avoided, as it may be confused with the concept of "service primitive" used elsewhere in the 802.3 standard (e.g., Clause 1).

SuggestedRemedy

Replace first paragraph of subclause with the following:

"The management interface has pervasive connections to all functions. Operation of the management control lines MDC and MDIO is specified in Clauses 22 [see Clause 22] and 45 [see Clause 45], and requirements for managed objects inside the PCS and PMA are specified in Clause 30 [see Clause 30].

"The following PAF sublayer signals are mapped to Clause 45 registers:"

Elsewhere in the subclause, replace all occurrences of the word "primitive" with "signal".

Proposed Response Response Status C

ACCEPT.

CI 61 SC 61.2.2.7.2 P 375 L 42 # 428
 O'Mahony, Barry Intel Corp.

Comment Type E Comment Status A

References to Clause 45 subclauses in this subclause need to be updated to match those in Clause 45/D 1.732.

SuggestedRemedy

Update them (e.g., TC_PAF_RxErrorReceived is 45.7.3.24).

Add reference to 45.7.3.18 for PAF_Enable.

Note, last two signals (PAF_LostStart and PAF_LostEnd) have no Clause 45 registers; this is addressed in a separate comment

Proposed Response Response Status C

ACCEPT.

CI 61 SC 61.2.2.7.3 P 376 L 22 # 221
 Tom Mathey Independent

Comment Type T Comment Status A

Reference is incorrect, and ability to perform text search is impaired. Clause 45 defines two bits in the EFM copper control register (see 45.2.2.1)

The text PAF_enable is in 61.2.2.7.2/3, but clause 45 uses PAF enable. A text serch for PAF_enable leads the reader to believe that there is no matching MMD register/bit.

SuggestedRemedy

Add a table which maps all MMD register bits and names to the corresponding PCS signal names.

Reference to 45.2.2.1 is incorrect.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

The names used in Clause 45 MUST match the names used in this clause - therefore a conversion table is not needed.

Make changes to this clause and Clause 45 to ensure that the two are identical.

Fix reference.

CI 61 SC 61.2.2.7.3 P 376 L 25 # 350
 Shohet, Zion Infineon

Comment Type E Comment Status A

PAF_enable bit is write/read only...: what does this mean

SuggestedRemedy

decide what is needed and correct accordingly.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

As the commenter correctly points out, the word ordering makes the sentence ambiguous.

Change:

"In all cases, the PAF_available bit is read-only, the PAF_enable bit is write/read only if the PAF_available bit is asserted."

To:

"The PAF_enable bit is read-only unless the PAF_available bit is asserted, in which case the PAF_enable bit is write/read."

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.3.2 P 379 L 54 # 340

Horvat, Michael Infineon Technologies

Comment Type E Comment Status A scope/editorial

Reference to SHDSL missing

SuggestedRemedy

Add reference to g.991.2.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add informative note:

"NOTE: An identical a(β) interface is defined in ITU-T G.991.2."

CI 61 SC 61.2.3.3.1 P 383 L 25 # 214

Tom Mathey Independent

Comment Type T Comment Status R

All ethernet phy's have the following characteristic:

If the local device can not "hear" from the remote partner and establish a link status = pass / up / enabled, then the local device blocks the transmit path from sending any MAC data, sends code-point remote fault to its link partner, and the receive path provides only idles to the MAC. When the receive link status is fail, then only idles or fault conditions (LF,RF: a form of auto-negotiation) is allowed on the transmit path.

If the link partner is receiving remote fault from the local device, then the link partner blocks its transmit path from sending any MAC data, and provides only idles and sync.

When the link is down (indicated by local fault and remote fault), then only idles and sync bytes can be sent on a transmit path. Thus only idle and sync can be present on the receive path. If a scrambler is added, then the descrambler has to hunt for the correct pattern, and scrambled idles can easily become equal to the code-point for sync. This makes the hunt more difficult, and use of scrambler is detrimental.

SuggestedRemedy

1. As an unavoidable consequence of link fail, the scrambler of 61.2.3.3.1 and descrambler of 61.2.3.3.2 are thus deleted.

The scrambler function was introduced due to the assumption that the remote partner could transmit continuous MAC frames when the local device had link status = fail, and the local device could then not achieve synchronization.

2. P802.3ah Draft 1.414 Comment response # 883 against item 4 is incorrect. The scrambler actually makes detection of sync bytes more difficult.

Proposed Response Response Status C

Motion to Reconsider (FAIL)

M: Ed Beili S: Thomas Mathey

Approve: 8 Don't Approve: 13

REJECT.

M: Hugh Barrass S: Ed Beili

Approve: 12 Don't Approve: 4 Abstain: 16

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.3.3.1 P 383 L 29 # 457
Langston, Daun Metanoia

Comment Type T Comment Status A

If scrambler and descrambler are not both initialized to zero, the first Ethernet frame is errored. Not good to error perfectly good data.

SuggestedRemedy

Solution: Affects two clauses 61.2.3.3.1 and 61.2.3.3.2. Recommend to add the following: The state of the scrambler (descrambler depending on clause) shall be initialized to zero before the first Ethernet frame is passed.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Initialization triggered by PMA_receive_synchronized.
See comment #214.

CI 61 SC 61.2.3.3.3 P 384 L 23 # 223
Tom Mathey Independent

Comment Type T Comment Status R

The transmit path defines the Ck length bytes to have even parity. However, the receive path has no requirement to check such parity, or how to recover from a parity error. A Parity error indicates that the length of the incoming frame is lost, and if two packets are back-to-back, then the start of frame for the second packet is unknown. With start of frame lost, then the end of frame is is suspect. For a continuing sequence of back-to-back packets, the receive path becomes completely lost. All due to a single bit error.

SuggestedRemedy

Define receive path action for:
1. when parity error, then describe required action
2. when length byte decodes to an illegal value, then describe required action. The encapsulation only uses $64 \times 2 = 128$ of the possible 256 values.
Note that the sync byte location is still valid.

Proposed Response Response Status C

REJECT.

The last row of Table 61-10 already specifies what to do when undefined values of Cn are received.

See also #459.

CI 61 SC 61.2.3.3.3 P 384 L 46 # 452
Langston, Daun Metanoia

Comment Type E Comment Status R

The paragraph is not clear about the core idea that you are either in-frame or out of frame. It is complicated by the other issues such sync byte insertion and Cn count values but does express the core idea clearly.

SuggestedRemedy

More emphasis that valid frames always begin with S. Following S the encoder is in-frame. The only way to get out of frame is to send Cn. After the count elapses the encoder is out-of-frame. Even if nothing follows, the encoder must send Cn = 90base16 which indicates the encoder is immediately out-of-frame.

Proposed Response Response Status C

REJECT.

Current text seems clear enough to this reviewer (Barry).

Please provide explicit proposed text remedy (i.e., exact new text) that would make things clearer to you.

CI 61 SC 61.2.3.3.3 P 385 L 25 # 450
Langston, Daun Metanoia

Comment Type E Comment Status A

this case, the next codeword begins with Sync Byte equal to F0 16 , C n equal to C 0 (81 16).

SuggestedRemedy

Wrong Value of 81base16 and should be 90base16.

Change to read:
this case, the next codeword begins with Sync Byte equal to 0xF0, C_n equal to C_0 (0x90) or 90base16.

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.3.3.3 P 386 L 48 # 351
 Shohet, Zion Infineon

Comment Type T Comment Status A

Cn values are incorrect. Example: C1 =81h, should be 11h, C2 should be 12h.

SuggestedRemedy

correct all the values accordingly

Proposed Response Response Status C

ACCEPT.

See also #451.

CI 61 SC 61.2.3.3.3 P 386 L 49 # 451
 Langston, Daun Metanoia

Comment Type E Comment Status A

Table 61-10

The example is incorrect:

C_0 = 0x90, C_1 = 0x81, C_2 = 0x82, ... C_62 = 0xBE, C_63 = 0x3F

SuggestedRemedy

Consider replacing with the correct example:

C_0 = 0x90, C_1 = 0x11, C_2 = 0x12, C_3 = 0x93 ... C_62 = 0x4E, C_63 = 0xCF

Proposed Response Response Status C

ACCEPT.

See also #351.

CI 61 SC 61.2.3.3.4 P 386 L 6 # 455
 Langston, Daun Metanoia

Comment Type E Comment Status A

the ã -interface

reads: they-interface in the text

SuggestedRemedy

fix by adding a space

Proposed Response Response Status C

ACCEPT.

CI 61 SC 61.2.3.3.5 P 344 L 12 # 99
 Thomas Dineen Dineen Consulting

Comment Type TR Comment Status A

I am receiving an increasing number of questions from customers which indicate a certain amount of confusion about the implementation of CRC functions and issues of bit ordering.

To assist in clearing up this confusion I am requesting that an informative annex be added to this clause which includes one to three compliant example frames with the associated correct CRC (FCS) value.

These frames will serve as divining rod frames which an implementor can quickly use to verify the integrity of his CRC implementation and thus achieve early inter operability.

SuggestedRemedy

To assist in clearing up this confusion I am requesting that an informative annex be added to this clause which includes one to three compliant example frames with the associated correct CRC (FCS) value. The example frames should include the required scrambling function. Examples should be provided for both the 2BASE-TL and 10PASS-TS cases.

Proposed Response Response Status W

ACCEPT IN PRINCIPLE.

Note that the language used to define the TC-CRC is identical to that used to define the Ethernet FCS in subclause 3.2.8. it should remain unchanged to ensure internal consistency in the 802.3 document.

In order to make bit ordering definition clearer, add the following to end of second paragraph in 61.2.3.3.6:

Add figure describing bit ordering from gamma-interface to alpha(beta)-interface, based on existing figures in Clause 44.

Any further changes requires a specific text remedy.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.3.3.5 P 386 L 28 # 458

Langston, Daun Metanoia

Comment Type E Comment Status R

The init status of the CRC is not clear.

SuggestedRemedy

Add the following:

Typical implementations of the CRC algorithm initialize all memory bits to binary 1 prior to passing the first bit through the generator.

Proposed Response Response Status C

REJECT.

Line 46 is equivalent to initializing a bits in the shift register to 1.

CI 61 SC 61.2.3.3.5 P 387 L 20 # 215

Tom Mathey Independent

Comment Type T Comment Status A

One of the requirements of Ethernet is adherence to the layering model. This requires that a layer n uses the interface provided by its upper layer n+1, and provides an interface to its lower layer n-1. The layering model does require:

that a given layer n have no (or perhaps limited) knowledge of the capabilities of its lower layer n-1, and

that layer n requires no specific knowledge of its upper layer n+1 capabilities.

This allows plug and play interoperability. Such as any 100BASE physical layer (copper or any fiber) can attach to any vendors MAC implementation using the defined MII. A MAC does not need to know what type of physical layer is present. Only adherence to the MII definition is required.

The addition of another CRC in the Clause 61 PCS is much like adding a second CRC to the MAC layer. Such a CRC could be used when the MAC is connected to fiber since fiber has a better signal to noise ratio (lower bit error rate) than copper, and thus can live with a less robust CRC.

Addition of second CRC to Clause 61 breaks the layer model requirements. A PCS implementation now needs to know which one of the many copper PMD's it is attached to, but there is mechanism available to provide such knowledge. Nor can layer management be used (MMD registers) as management is optional. Management might be available in a PCS implementation, but not for the attached PMD.

SuggestedRemedy

Revert back to a single CRC. Provide a presentation, not available from previous meeting which made this technical change, to show that a single 16 bit CRC will work for all PMD's. Without a presentation, future PMD's will not have a reference to the requirements.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

There appears ample precedent for tailoring the PCS sublayer to the underlying PMD.

The change was made to decrease overhead for 10PASS-TS PHYs.

A single 16-bit CRC will not work for all PMD's. That is why a 32-bit CRC is specified for 2BASE-TL. See encapsulation presentation in Copper Baseline for further detail.

A 16-bit CRC is sufficient for 10PASS-TS now that R-S decoder failure information is available; see omahony_2_0502.pdf, specifically slide 14.

P802.3ah Draft 1.732 Comments

Add 8-bit wide signal "flavor" <name to be changed> to alpha(beta)-interface, allowing the PMA to indicate port type to PCS.

CI 61 SC 61.2.3.3.5 P 388 L 18 # 454

Langston, Daun Metanoia

Comment Type E Comment Status A

Explain why a 16 bit CRC is good enough to help the reader understand the motivation for the CRC in 10PASS-TS that is different from 2Base-TL.

SuggestedRemedy

Add the explanation:

Add after: At the receiver, a payload received without error will result in the remain-der OD0F 16 when divided by G(x).

A sixteen bit CRC restores the data integrity to a typical Ethernet Phy on wire.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add footnote: For 10PASS-TS, a 16 bit CRC is sufficient for detecting payload errors, as the error-detecting capabilities of its Reed-Solomon decoder is also employed (see 61.2.3.3.8). In 2BASE-TL PHY's, a Reed-Solomon decoder is not present, hence a stronger FCS is required.

CI 61 SC 61.2.3.3.5 P 388 L 48 # 453

Langston, Daun Metanoia

Comment Type E Comment Status A

left-mostbit is misspelled and very confusing.

SuggestedRemedy

Spell out that left most bit is LSB or refer to the clause where LeftMostBit is defined. The editor should use the common font or remind the reader that the LSB, as LeftMostBit is backwards to the most common format. The editor should refer the reader back to clause 22.2.3 figure 22-11.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Change "leftmostbit" to "left-most bit". Note this makes the wording identical to that for the Ethernet FCS in 3.2.8.

Add note referencing Figure 22-11.

CI 61 SC 61.2.3.3.7 P 388 L 37 # 222

Tom Mathey Independent

Comment Type T Comment Status A

At present, the sync detect state machine declares TC_synchronized as true when 4 unequivocal syncs have been received. This is a necessary but not sufficient condition. An additional condition of transmit enable equals false from the MII is needed. The MAC could be transmitting frames on the transmit path, and link status as true/up could occur during such a frame. The PCS world becomes unhappy if the transmit path sends less than 64 bytes total (MAC payload plus encapsulation crc 4 bytes).

SuggestedRemedy

Add transmit enable = false to exit from state Looking. Add text that when TC_synchronized is false, then the transmit path at the MII is blocked.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add text to 61.2.1.1:

"Transmit frames shall not be forwarded, unless TC_synchronized is true for the whole frame.

NOTE: This implies that frames being transmitted over the MII when TC_synchronized becomes true, are never forwarded. A frame being transmitted over the MII when TC_synchronized becomes false shall be aborted."

License is granted to the Editor to make this text look more like Clause 46.

CI 61 SC 61.2.3.3.8 P 389 L 49 # 459

Langston, Daun Metanoia

Comment Type T Comment Status R

What is done with parity error received in the Cn character?

SuggestedRemedy

A Cn Character with improper parity shall be replaced with Co (90base16).

Proposed Response Response Status C

REJECT.

Last row of Table 61-10 already specifies what to do.

See also #223.

P802.3ah Draft 1.732 Comments

CI 61 SC 61.2.3.3.8 P 389 L 49 # 456
Langston, Daun Metanoia

Comment Type E Comment Status R

The clause correctly states that is Synchronized = false takes the decoder out of frame. you go out of frame. It does state the conditions for going back in-frame.

SuggestedRemedy

The criterion is encoder goes in-frame if Synchronized = true and S character is received. This should be added for clarity. A better criterion may be suggested by the sub-task force.

Proposed Response Response Status C

REJECT.

Unclear what the problem is.

Please provide specific text remedy.

CI 61 SC 61.3 P 391 L 1 # 252
Beili, Edward Actelis Networks

Comment Type TR Comment Status R

All handshake transactions defined in G.994.1 (par 10.1) are initiated by the -R side, while all handshake procedures needed for EFM are -C initiated. This may create some problems.

SuggestedRemedy

Define -C initiated transactions needed for EFM handshake and add it to G.994.1.

Proposed Response Response Status C

REJECT.

Suggested remedy is not sufficiently specific. Changes to G.994.1 are outside the scope of our PAR.

Note: G.994.1 sessions may be initiated by either the -R or the -C side initiating Startup and sending tones. While the first message in a G.994.1 transaction is always sent by the -R side, the HSTU-R is required to send a message, and thus start a transaction, at the completion of Startup; see 11.1.1 and 11.2.1 of G.994.1. In addition, G.994.1 regards the -C side as the "master" and always allows it to force a specific mode. In other words, G.994.1 procedures may always be initiated by the -C, and in accordance with the Baseline, the -C may always control the outcome.

CI 61 SC 61.3.8.7.1 P 352 L 30 # 63002
Ed Beili

Comment Type TR Comment Status A

Today's implementation of silence period makes requesting the Long Silence period unpredictable, i.e.

The C-side sends an MS message with standard NPar(1) Silent period bit set. In order to prolong the silence the C-side waits for the R-side to initiate another handshake session (after 1 min is over), by sending activation tones and then some handshake message. At the end of the transaction the C-side finally send another MS message with the Npar(1) period bit set. As you can see the silence is broken.

SuggestedRemedy

Add a silent period bit in SPar(2) field, under the EFM SPar(1) code point (bit #3 in SPar(2) octet 2 in both 10PassTS and 2BaseTL). Specify requested silence period length in NPar(3) field, 6 bit long, in steps of 10 seconds (from 10 seconds to 10 minutes). The silent period bit shall be set in CLR or CL message. Setting the bit in MS message request a silence period, of 1..255 seconds long, as specified by silence period length field. If the length is set to 0x00, the peer station shall remain silent for 10 min (640 sec). The station that has invoked the silence period by transmitting MS may terminate the silent period prior to the requested length, by restarting the handshake session (sending activation tones).

The silence period length shall be set to 0x00 in CLR or CL message.

Proposed Response Response Status C

ACCEPT.

CI 61 SC 61.3.8.7.1 P 352 L 30 # 253
Beili, Edward Actelis Networks

Comment Type TR Comment Status A

The explanation of the "Silent period" bit states when set to ONE it requests a silence period at the other transmitter of approximately 1 minute.

The word "approximately" is too vague.

SuggestedRemedy

Request a silence period at the peer transmitter of at least 60 seconds (at most 90 seconds).

I would even go further as to suggest an addition of a silence period length parameter to the HS message to specify the duration in seconds (say between 10 and 200 sec), similar to the PAUSE Ethernet frame.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Change "approximately 1 minute" to "at least 60 seconds and at most 90 seconds".

P802.3ah Draft 1.732 Comments

CI 61 SC 61.3.8.7.3 P 411 L 36 # 341
 Horvat, Michael Infineon Technologies

Comment Type T Comment Status R
 Definition of 2BASE-TL Band A and B operation not clear

SuggestedRemedy
 Flesh out 2BASE-TL Band A and B operation.

Also clarify use of regenerators for 2BASE-TL.

Proposed Response Response Status C
 REJECT.
 Band A and B are specified in Clause 63. The specification and use of regenerators is outside the scope of this standard.

CI 61 SC 61.3.8.7.3 P 420 L 30 # 342
 Horvat, Michael Infineon Technologies

Comment Type T Comment Status A
 On Table 61-107: no sub data rates defined for 2BASE-TL (i=0)

SuggestedRemedy
 Remove entire table.

Proposed Response Response Status C
 ACCEPT.

CI 61 SC 61.3.8.7.3 P 430 L 12 # 343
 Horvat, Michael Infineon Technologies

Comment Type T Comment Status A
 On Table 61-135: for synchronous mode only 2 stuff bits defined, no plesiochronous mode supported.

SuggestedRemedy
 Remove the 2 stuff bits #3 and #4.

The same applies to line 43.

Proposed Response Response Status C
 ACCEPT.

CI 61 SC 61.4.1 P 435 L 14 # 352
 Shohet, Zion Infineon

Comment Type E Comment Status R
 The CO-side get a "get" command. How does CPE know and initiate g.hs exchange?

SuggestedRemedy

Proposed Response Response Status C
 REJECT.
 Need specific remedy. See also comment #252.

CI 61 SC Figure 61-18 P 389 L 25 # 556
 Cravens, George Mindspeed

Comment Type T Comment Status A
 The state "FreeWheelSyncTrue" should have an exit to the state "Synced" if an expected sync is detected.

SuggestedRemedy
 Add an exit condition from the state "FreeWheelSyncTrue" to the state "Synced" when "expected sync" is detected.

Proposed Response Response Status C
 ACCEPT.

CI 61 SC Figure 61.8 P 369 L 13 # 555
 Cravens, George Mindspeed

Comment Type E Comment Status R scope
 The label of state "TX_EN_ACTIVE" is misleading. Since the state is checking for TX_EN, rename it to "Check_for_TX" (or something similar that does not imply that the state is asserting TX_EN).

SuggestedRemedy
 Rename state "TX_EN_ACTIVE" to "Check_for_TX".

Proposed Response Response Status C
 REJECT.
 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

A change like this at this stage is more likely to introduce inconsistencies than to remove ambiguity.

P802.3ah Draft 1.732 Comments

CI 62 SC 62.2 P 477 L 26 # 557
 Jeff, Lee Cisco Systems, Inc.
 Comment Type T Comment Status A scope
 This is really confusing. I can't tell what data bytes are the MSB, what's transmitted first to the outside world, etc.
 SuggestedRemedy
 There should be a picture here to clarify.
 Proposed Response Response Status C
 ACCEPT.
 Editor to add figure.

CI 62 SC 62.4.4.2.2 P 459 L 23 # 346
 Shohet, Zion Infineon
 Comment Type T Comment Status A
 tone spacing is referenced to 62.4.4.8
 62.4.4.8 referces to t1e1 spec section 13.
 However, clause 13 is out of the scope as said on page 468 line 54
 SuggestedRemedy
 delete line 23 24 on page 459.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 This is an artefact of the semi-automatic DIFF-generation process.
 The reference should point to 62.4.4.10 (Reference section 14), which specifies 8.625 kHz tone spacing. Reference section 14 is in scope, as agreed in resolution of comments #827/D1.1, #580/D1.2 and #605/D1.414.
 Headings 62.4.4.6.7 (Reference section 14.1) through 62.4.4.7.2 (Reference section 14.6) logically belong under heading 62.4.4.10. Editor shall restore the logical order.

CI 62 SC 62.4.4.6.5 P 464 L 15 # 387
 Venugopal, Padmabala UNH-IOL
 Comment Type E Comment Status A
 Short description for the Npar(2) bit name missing in row 5 of table 62-9
 SuggestedRemedy
 The value of first column in row 5 is " G.997.1 Clear EOC OAM"
 Proposed Response Response Status C
 ACCEPT.

CI 62 SC 62.4.4.6.5 P 464 L 35 # 389
 Venugopal, Padmabala UNH-IOL
 Comment Type E Comment Status A
 '*' multiplication sign missing in '40 2^n' line 35
 '*' multiplication sign missing in '256 2^n' line 36
 SuggestedRemedy
 Change '40 2^n' to '40 * 2^n' in line 35
 change '256 2^n' to '256 * 2^n' in line 36
 Proposed Response Response Status C
 ACCEPT.

CI 62 SC 62.4.4.6.5 P 465 L 17 # 388
 Venugopal, Padmabala UNH-IOL
 Comment Type E Comment Status A
 Short description for the Npar(2) bit name missing in row 5 of table 62-11
 SuggestedRemedy
 The value of first column in row 5 is " G.997.1 Clear EOC OAM"
 Proposed Response Response Status C
 ACCEPT.

CI 62 SC 62.4.4.8 P 469 L 1 # 347
 Shohet, Zion Infineon
 Comment Type T Comment Status A
 figure 62-8 is same as figure 62-7
 SuggestedRemedy
 delete figure 62-8
 Proposed Response Response Status C
 ACCEPT.
 This is an artefact of the semi-automatic DIFF-generation process. The error doesn't appear in the PLAIN document. No action required.

P802.3ah Draft 1.732 Comments

CI 62 SC 62.5.1.1 P 472 L 14 # 558
 Jeff, Lee Cisco Systems, Inc.

Comment Type T Comment Status A scope

"the other carriers may not be used" seems to imply that you cannot use any other carriers. I think what's meant is that you have the option to not use other carriers.

SuggestedRemedy

This should be clarified by saying something like "the other carriers may be optionally disabled."

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 62 SC 62.5.1.2 P 472 L 12 # 559
 Jeff, Lee Cisco Systems, Inc.

Comment Type T Comment Status R scope

If I don't use band-pass filters, am I not standards compliant? This seems like an implementation detail, and implementations should not be specified.

SuggestedRemedy

Change the diagram and text to specify the design goal, not the implementation.

Proposed Response Response Status C

REJECT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

The type of filtering function is not specified, but it is clear to experts that a filtering function is required in any case. The current text matches the specification in T1.424/Trial-Use.

CI 62 SC 62.5.2.2.1 P 474 L 13 # 345
 Shohet, Zion Infineon

Comment Type T Comment Status A

on figure 62-10: point (x=17, y=15)= 1111000. should be 1110000

SuggestedRemedy

chnage point (x=17, y=15) to 1111000.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

change point (x=17, y=15) to 1110000 (as indicated in comment).

CI 62 SC 62.5.4.1 P 479 L 38 # 560
 Jeff, Lee Cisco Systems, Inc.

Comment Type T Comment Status A scope

the word "options" is innapropriate.

SuggestedRemedy

change the words "All options" to "mechanisms"

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 62 SC 62.5.4.2 P 481 L 30 # 562
 Jeff, Lee Cisco Systems, Inc.

Comment Type T Comment Status A

In table 62-24, why are there two Maximum PSD columns? They're exactly the same.

SuggestedRemedy

Clarify or remove one of the columns

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

There are also 2 "frequency, mhz" columns. Delete both right columns of the table.

P802.3ah Draft 1.732 Comments

CI 62 **SC 62.6.4.3** **P 491** **L 26** # **390**
 Venugopal, Padmabala UNH-IOL
Comment Type **E** **Comment Status** **A**
 Typo: Sliding misspelt as Slowing
SuggestedRemedy
 Change text to 1 MHz sliding window
Proposed Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 Same error on page 460 line 40.
 Same error in T1.424/Trial-Use Part 1, page 19.

CI 62A **SC 62A.3** **P 609** **L 23** # **515**
 Barrass, Hugh Cisco Systems
Comment Type **T** **Comment Status** **A**
 As per editor's note, profiles must be changed to match TS 101 270 definitions.
SuggestedRemedy
 Replace current profiles 7-12 with the following (note that these new profiles will be 13-24 if previous comment is also accepted):

 13 : G.993.1 : Bandplan B : TS 101 270-1 Pcab.M1 : x/D/U/D/U
 14 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P1.M1 : x/D/U/D/U
 15 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P2.M1 : x/D/U/D/U
 16 : G.993.1 : Bandplan B : TS 101 270-1 Pcab.M1 : U/D/U/D/x
 17 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P1.M1 : U/D/U/D/x
 18 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P2.M1 : U/D/U/D/x
 19 : G.993.1 : Bandplan B : TS 101 270-1 Pcab.M2 : x/D/U/D/U
 20 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P1.M2 : x/D/U/D/U
 21 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P2.M2 : x/D/U/D/U
 22 : G.993.1 : Bandplan B : TS 101 270-1 Pcab.M2 : U/D/U/D/x
 23 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P1.M2 : U/D/U/D/x
 24 : G.993.1 : Bandplan B : TS 101 270-1 Pex.P2.M2 : U/D/U/D/x
Proposed Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 See resolution of comment #366.

CI 62A **SC 62A.3.1** **P 609** **L 15** # **514**
 Barrass, Hugh Cisco Systems
Comment Type **T** **Comment Status** **A**
 As per editor's note, profiles must be changed to match T1.424 definitions.
SuggestedRemedy
 For profiles 1 to 6 add ".M1" after "FTTCab" or "FTTEEx"

 Duplicate profiles 1 to 6 but add ".M2" after "FTTCab" or "FTTEEx"

 New profiles become profiles 7 to 12.

 Table 62B-1 references to profiles 1 & 2 remain unchanged, references to profiles 7 & 8 become 13 & 14.
Proposed Response **Response Status** **C**
 ACCEPT IN PRINCIPLE.
 See resolution of comment #366.

CI 62A **SC 62A.3.1** **P 609** **L 44** # **366**
 Beck, Michael Alcatel Bell nv
Comment Type **TR** **Comment Status** **A**
 Table 62A-1 is incomplete.
SuggestedRemedy
 Execute Editor's note, taking into account that ETSI mask Pcab.M1 has two variants A and B.
Proposed Response **Response Status** **C**
 ACCEPT.

CI 62A **SC 62A.3.2.1** **P 610** **L 44** # **368**
 Beck, Michael Alcatel Bell nv
Comment Type **T** **Comment Status** **A**
 In Table 62A-3, bandplan "Annex F" is not fully specified.
SuggestedRemedy
 Add footnote: Band 1D starts at 640kHz when operating in the frequency region above TCM-ISDN DSL band. Band 1D starts at 1.104MHz when operating with PSD reduction function in the frequency region below 1.104Mhz.
Proposed Response **Response Status** **C**
 ACCEPT.

P802.3ah Draft 1.732 Comments

Cl 62A SC 62A.3.2.2 P 610 L 54 # 367

Beck, Michael Alcatel Bell nv

Comment Type T Comment Status A scope

Subclause appears to be empty.

SuggestedRemedy

Remove subclause. This makes the separate heading for "62A.3.2.1 ITU-T Approved bandplans" obsolete. Remove heading.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

Cl 62A SC 62A.3.3 P 611 L 3 # 369

Beck, Michael Alcatel Bell nv

Comment Type TR Comment Status A

Subclause appears to be empty.

SuggestedRemedy

Add text:

"The management entity should load the appropriate Clause 45 registers according to the PSD Mask specified by the selected profile. Informative Annex 62C contains examples of the use of Clause 45 registers for the purpose of setting profiles. The VDSL PSD Masks defined in ITU-T Recommendation G.993.1, T1.424/Trial-Use and ETSI TS 101 270-1 shall be supported by all 10PASS-TS PMDs."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Change "should" in first sentence to "shall", also applies to 62A.3.2.2. Resolution of comment #371 may apply.

Cl 62A SC 62A.3.4 P 610 L 1 # 470

Simon, Scott Cisco Systems, Inc.

Comment Type T Comment Status A

Table 62A-2 has an innapropriate title. Mandatory is implied by the normative clause.

SuggestedRemedy

Strike the word "Mandatory"

Proposed Response Response Status C

ACCEPT.

Cl 62A SC 62A.3.4 P 611 L 8 # 561

Jeff, Lee Cisco Systems, Inc.

Comment Type T Comment Status A

Looking at Table 62A-2, I see no units. Is it dBm/Hz, or dBm, or what?

SuggestedRemedy

Add the units.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add text to Table caption: "(f is in MHz, the PSD level is in dBm/Hz)".

Cl 62A SC 62A.3.6 P 611 L 45 # 474

Simon, Scott Cisco Systems, Inc.

Comment Type T Comment Status A scope

"The profile is specified in the format Drate/Urate as the minimum payload rate required. . ."

this text is innacurate. When a particular bitrate profile is selected, the PHY may only allow that bit rate, no more no less. Higher levels will expect the link to be running at the selected speed.

SuggestedRemedy

Change sentence to read:

"The profile is specified in the format Drate/Urate as the payload bitrate that the PHY link shall provide. . ."

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

P802.3ah Draft 1.732 Comments

CI 62A SC 62A.3.6 P 611 L 47 # 554
 Cravens, George Mindspeed

Comment Type TR Comment Status R

Since the argument used to prohibit enhanced G.SHDSL was that there must be an approved PSD from an international standards body, the same argument must be applied to VDSL.

Remove all references to VDSL rates beyond those supported by approved standards bodies.

SuggestedRemedy

Remove DRate values 50, 70, and 100.

Proposed Response Response Status C

REJECT.

Approve: 28 Don't Approve: 9 Abstain: 6

Commenter agreed with resolution of this comment after resolution of comment #99301 by the Task Force.

--- DISCUSSION SUMMARY ---

[Motion to postpone until after discussion of Clause 63 comments.

M: Scott Simon S: Ed Beili

Approve: 14 Don't Approve: 29 (incl. Editor) Abstain: 1]

Downstream rates of 50, 70 and 100 Mbps can be met on short loops by appropriately selecting frequency Fx in ITU-T Bandplan C.

CI 62A SC 62A.3.6 P 611 L 50 # 370
 Beck, Michael Alcatel Bell nv

Comment Type E Comment Status A

Number of Payload Rate Profiles needs to be updated.

SuggestedRemedy

Change last sentence to: "This leads to a total of 9 symmetric and 90 asymmetric Payload Rate Profiles."

Proposed Response Response Status C

ACCEPT.

CI 62A SC 62A.4 P 612 L 46 # 371
 Beck, Michael Alcatel Bell nv

Comment Type TR Comment Status A

Subclause appears to be empty.

SuggestedRemedy

Replace subclause with content of beck_2_0603.pdf. Change references in 62A.3.2 (p.610 l.22) and 62A.3.3 (to be added on p.611) to point to this subclause instead of Annex 62C.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

License is granted to Editor to address tone spacing issue. Variable type "short" is changed to "int".

CI 62B SC 62B.3 P 614 L 45 # 509
 Barrass, Hugh Cisco Systems

Comment Type TR Comment Status A

In various places in Clause 62 references are made to "out of scope" options defined in the referenced document. It is vital for true interoperability that normative tests are conducted without reliance on out of scope options which may or may not be present in various implementations of compliant PHYs.

Therefore the tests described in this annex, which are intended to guarantee a consistent level of performance for all 10PASS-TS PHYs, are conducted without the use of these options.

SuggestedRemedy

Add sentence to end of paragraph:

If the PHY under test includes any implementation options defined in the reference document (but out of scope for this standard) these options shall be disabled in such a manner as to render the behavior identical to implementations without such options.

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI **62B** SC **62B.3** P **615** L # **386**
 Barnea, Eyal Metalink Broadband A

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

Table 62B-1 describes different test scenarios using noise models A and F.
 Noise model A models a typical cabinet cross-talk, and noise model F models typical CO deployment cross-talk.

SuggestedRemedy

Change the noise models used in the following way:

- Test 2 - profile 8 - noise A
- Test 3 - profile 7 - noise F
- Test 6 - profile 8 - noise A
- Test 7 - profile 7 - noise F

Proposed Response Response Status **C**
 ACCEPT.

CI **62B** SC **62B.3** P **615** L **1** # **353**
 Shohet, Zion Infineon

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

Table 62B-1 needs test loop length values.
 The following values are proposed to be used in the table. these numbers are obtained by simulation using 2.5-dB implementation loss.

- The values are:
- test2: 475 meters
 - test4: 325
 - test 5: 500
 - test 6: 475
 - test 7: 850
 - test 8:325
 - test 9: 500

SuggestedRemedy

substitute the above numbers in the table.

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

- Following reaches are adopted by the Task Force:
- test2: 575m
 - test4: 400m
 - test 5: 500m
 - test 6: 475m
 - test 7: 500m
 - test 8: 350m
 - test 9: 450m

CI **62B** SC **62B.3** P **615** L **6** # **516**
 Barrass, Hugh Cisco Systems

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

All payload data rate profiles required by 62A must be tested normatively and included in this table.

The upstream and downstream rates may be configured independently therefore at least 11 tests are required (but not all 99 combinations).

The bandplans used must include the majority of those defined in 62A.

The distances should correspond to those achieved in the "VDSL Olympics" and those described in various rate/reach curves displayed during TF review.

SuggestedRemedy

Add rows to table 62B-1 as shown in barrass_cmnts_1_0603.pdf

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

All tests are duplicated with notches enabled.

P802.3ah Draft 1.732 Comments

CI **62C** SC **62C.1** P **618** L **6** # **517**
 Barrass, Hugh Cisco Systems

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

During discussion regarding unresolved comment #99301 in the Task Force interim meeting in May it was stated that the PHY must not be allowed to configure a bandplan which is not universally accepted by telecommunications standards bodies. If this rule is applied equally to Clause 62 and Clause 63 PHYs then 10PASS-TS must not contain any flexibility which might allow it to be configured in a manner which is not compliant with with all spectral compatibility regulations, including those defined by T1E1.4, ETSI and other national and regional standards organizations. This rule appears to preclude the use of "private" bandplans in private installations.

SuggestedRemedy

Delete Annex 62C.

Also remove all register settings and controls which enable the use of illegal bandplans in Clauses 62 and 45.

(Note that the commenter will withdraw this comment iff the resolution of comment #99301 is accepted i.e.

Add to 63.3.1:

- f) The 2BASE-TL PMD supports the use of the enhanced SHDSL extended bandwidths. Change the upper limit of Eq. (2) of 63.3.2.1 from n=36 to n=60
- Change the upper limit of Eq. (4) of 63.3.2.1 from n=48 to n=89
- Give the editor license to make the necessary editorial changes to include enhanced SHDSL.)

Proposed Response Response Status **Z**
 WITHDRAWN.

This comment was withdrawn after resolution by the Task Force of comment #99301.

CI **62C** SC **62c.2.2** P **619** L **2** # **475**
 Simon, Scott Cisco Systems, Inc.

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

Annex 62C contains examples of how to configure 10PASS-TS PHYs for non-profile operation. The Annex is not the proper venue for spectral compatability or performance discussions.

Using the bandplan illustrated in Figure 01 is appropriate in the context of demonstrating a custom bandplan.

The discussion that follows about spectral compatability and rate/reach is not appropriate.

SuggestedRemedy

Strike the text that starts on pg 619, line 30 through to the end of the subclause.

Remove Table 01 and Figures 02, 03 and 04.

Proposed Response Response Status **Z**
 WITHDRAWN.

PROPOSED ACCEPT.

M: Hugh Barrass S: Scott Simon

Approve: 9 Don't Approve: 7 Abstain: 4

PROPOSED REJECT.

Approve: 13 Don't Approve: 8 Abstain: 5

Accepted comment #1119/D1.414 specifically suggested adding this example to "show meeting spectral compatibility requirements (i.e. set in ANSI)". As this is an informative annex, it is the proper venue for different kinds of information that may help users and implementers to understand system-level issues.

P802.3ah Draft 1.732 Comments

CI **62C** SC **62C.2.3** P **621** L # **385**
 Barnea, Eyal Metalink Broadband A

Comment Type **T** Comment Status **D**
 10PASS-T is based on VDSL stdanrad. All VDSL standards, and all bandplans in 62A are 4 bands. Therefore this example is not adequate for 10Pass-T

SuggestedRemedy
 Delete the subclause

Proposed Response Response Status **Z**
 WITHDRAWN.

PROPOSED REJECT.
 This example was added in resolution of comment #616/D1.414 (accepted).
 10PASS-TS is based on the adopted baseline, rezvani_1_0302.pdf and notes_to_editor_1_0302.pdf. Note 7 reads: "There will be work to research and possibly define other band plans."

CI **63** SC **63** P L # **99301**
 Squire, Matt Hatteras Networks

Comment Type **T** Comment Status **A** D1.3 #793
 T1E1.4 has recently adopted higher constellations and altered bandplans for SHDSL operation in North America. Clause 63 (and 63A and 63B) should be allowed to take advantage of these adopted constellations and PSDs.

SuggestedRemedy

Proposed Response Response Status **C**

ACCEPT IN PRINCIPLE.
 Motion during June 2003 Task Force closing plenary:
 M: Scott Simon S: Matt Squire
 (everybody) Approve: 54 Don't Approve: 4 Abstain: 29
 (802.3 voters) Approve: 31 Don't approve: 2 Abstain: 16
 "Add to 63.3.1:
 f) The 2BASE-TL PMD supports the use of the enhanced SHDSL extended bandwidths. Change the upper limit of Eq. (2) of 63.3.2.1 from n=36 to n=60
 Change the upper limit of Eq. (4) of 63.3.2.1 from n=48 to n=89
 Give the editor license to make the necessary editorial changes to include enhanced SHDSL."

COMMENT HISTORY:

---June 2003---
 PROPOSED ACCEPT IN PRINCIPLE.
 M: Scott Simon S: Ed Beili
 (everybody) Approve: 17 Don't Approve: 11 Abstain: 14
 (802.3 voters) Approve: 14 Don't approve: 8 Abstain: 8

"Add to 63.3.1:
 f) The 2BASE-TL PMD supports the use of the enhanced SHDSL extended bandwidths. Change the upper limit of Eq. (2) of 63.3.2.1 from n=36 to n=60
 Change the upper limit of Eq. (4) of 63.3.2.1 from n=48 to n=89
 Give the editor license to make the necessary editorial changes to include enhanced SHDSL."

---May 2003---
 Motion during May 2003 Task Force closing plenary:
 M: Marc Kimpe S: George Cravens
 (complete TF) Approve: 21 Don't Approve: 19 Abstain: 12
 (802.3 voters) Approve: 17 Don't Approve: 10 Abstain: 8
 "Accept in principle:
 Add to 63.3.1:

P802.3ah Draft 1.732 Comments

f) The 2BASE-TL PMD supports the use of the enhanced SHDSL extended bandwidths.
 Change the upper limit of Eq. (2) of 63.3.2.1 from n=36 to n=60
 Change the upper limit of Eq. (4) of 63.3.2.1 from n=48 to n=89
 Give the editor license to make the necessary editorial changes to include enhanced SHDSL."

---May 2003---

PROPOSED ACCEPT IN PRINCIPLE.

M: Marc Kimpe S: George Cravens

Approve: 13 Don't approve: 6 Abstain: 3

P354 Add bullets to 63.3.1

f) The 2BASE-TL PMD supports the use of extended bandwidth. Those are subject to regulations in the public network.

g) The support of enhanced SHDSL is optional

License is granted to the editor to further clarify what "enhanced SHDSL" means.

In 63.3.2.1 Adjust rate as per agreement in T1E1.4. Adjust the upper limit of Eq.2 to n=60 and the upper limit of Eq.4 to n=89, to reflect the agreements in T1E1.4.

PROPOSED ACCEPT IN PRINCIPLE.

Approve: 14 Don't Approve: 7 Abstain: 2

P354 Add bullet to 63.3.1

f) The 2BASE-TL PMD supports the use of extended bandwidth. Those are subject to regulations in the public network.

In 63.3.2.1 Adjust rate as per agreement in T1E1.4 (Editor's note: precise reference to be added). Adjust Eq.2 and 4, to reflect the agreements in T1E1.4.

---March 2003---

Propose to give the editor the freedom to supply text in support of 32PAM constellations and of the new PSDs adopted in T1E1.4.

PROPOSED ACCEPT IN PRINCIPLE.

Approve: 12 Don't Approve: 14 Abstain: 2

PROPOSED REJECT.

Approve: 14 Don't Approve: 12 Abstain: 3

<i>Cl</i> 63	<i>SC</i> 63.1.3	<i>P</i> 496	<i>L</i> 22	# 344
Horvat, Michael		Infineon Technologies		

<i>Comment Type</i> E	<i>Comment Status</i> R	<i>scope</i>
Term "reference section" without reference used in following sections.		

Suggested Remedy

Add note that term "reference section" used in the following chapters always relates to ITU-T g.991.2.

<i>Proposed Response</i>	<i>Response Status</i> C
--------------------------	---------------------------------

REJECT.

The use of the term "reference section" is identical as in Clause 62. "Reference" is not ambiguous, as 63.2.2 and 63.3.2 mention only one referenced document.

P802.3ah Draft 1.732 Comments

CI 63 SC 63.3.1 P 500 L 40 # 553
 Cravens, George Mindspeed

Comment Type TR Comment Status R

Clause 63 (and 63A and 63B) should be allowed to take advantage of enhanced SHDSL by optionally supporting the constellations and PSDs adopted by T1E1.4

SuggestedRemedy

Add bullets to 63.3.1:

- f) The 2BASE-TL PMD supports the use of extended bandwidth.
- g) The support of enhanced SHDSL is optional.

License is granted to the editor to further clarify what "enhanced SHDSL" means.

In 63.3.2.1 Adjust rate as per agreement in T1E1.4. Adjust the upper limit of Eq.2 to n=60 and the upper limit of Eq.4 to n=89, to reflect the agreements in T1E1.4.

Proposed Response REJECT Response Status C

Approve: 30 (incl. Editor) Don't Approve: 10 Abstain: 4

Commenter agreed with resolution of this comment after resolution of comment #99301 by the Task Force.

--- DISCUSSION SUMMARY ---

Motion to reconsider (Barrass/Simon): Acclamation

Motion to postpone until after #99301.

M: Hugh Barrass S: Eyal Barnea

PROPOSED REJECT.

Approve: 29 (incl. Editor) Don't Approve: 10 Abstain: 8

Specifying optional support for a mode of operation with significantly different characteristics is equivalent to adding a new port type, 5BASE-TL. This causes following problems:

- The suggested remedy is not sufficiently detailed to allow the editor to specify 5BASE-TL in a technically complete manner. For instance, port type specific PCS parameters are not given (CRC polynomial, PAF parameters, etc.)
- Every 802.3 port type has to satisfy the 5 criteria. No material is provided with this comment to indicate that this is the case with 5BASE-TL. In particular, distinct identity w.r.t. 10PASS-TS is not addressed.
- There is no adopted objective in the Task Force for which 5BASE-TL is needed.

Note: This proposal was offered to the Copper Sub Task Force in an attempt to resolve comment #793/D1.3 (May 2003), but failed.

CI 64 SC P L # 297
 Glen Kramer Teknovus

Comment Type E Comment Status A

Typos:

Page 538, Line 3: "rendomly" should be "randomly"

Page 546, Line 37: "invoced" should be "invoked"

SuggestedRemedy

Proposed Response ACCEPT Response Status C

CI 64 SC P L # 64001
 Ariel Maislos

Comment Type E Comment Status A

Accept editorial comments as submitted by Editor-in-Chief on behalf of 802 editorial team

SuggestedRemedy

Proposed Response ACCEPT Response Status C

CI 64 SC 2 P 512 L 26 # 519
 Han, Kyeong-Soo ETRI

Comment Type E Comment Status A

Grammar

SuggestedRemedy

change "These block is .." to "These blocks are ..".

Proposed Response ACCEPT Response Status C

CI 64 SC 2.3.1 P 517 L 28 # 520
 Han, Kyeong-Soo ETRI

Comment Type E Comment Status A

time_quanta are defined as 16 bit times in Clause 64.3.4.4

SuggestedRemedy

change "16 bits" to "16 bit times". (line 28 and 33)

Proposed Response ACCEPT Response Status C

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CI 64 SC 64.1.2 P 510 L 6 # 52
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 "LOGICAL LINK CONTROL" is not necessary since there is an abbreviation below figure 64-2
 SuggestedRemedy
 Remove it.
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.1.4 P 512 L 8 # 19
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 Difference between bit vector and octet vector is not specified.
 SuggestedRemedy
 Suggest:
 bit vector: data[1:16]
 octet vector: m_sdu[0..1]
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.2 P 512 L 22 # 23
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 After decision to remove OMP, the naming of 3 MPCP blocks is not standardized. Flow control/Discovery/Report/Gate blocks are all opcode-specific, so calling only 3 MPCP blocks opcode specific blocks may not be appropriate.
 SuggestedRemedy
 Suggest naming Discovery/Report/Gate blocks as MPCP blocks;
 Flow control/Discovery/Report/Gate blocks as opcode-specific blocks
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Use "opcode-specific functional blocks" as consistant naming method when referencing more than a single functional block.

CI 64 SC 64.2 P 512 L 26 # 197
 Karasawa, Satoru OF Networks
 Comment Type E Comment Status A
 There is a typo.
 SuggestedRemedy
 (f) "These block is" should be "These blocks are"
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.2 P 512 L 26 # 72
 Yeo, Doreen Institute of Microelectr
 Comment Type E Comment Status A
 "These block is responsible" should be "These blocks are responsible"
 SuggestedRemedy
 Change "These block is responsible" to "These blocks are responsible"
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.2 P 512 L 26 # 1
 Tan , Chik Liang I2R
 Comment Type E Comment Status A
 The word "block" should be changed to "blocks" to indicate plurality.
 SuggestedRemedy
 Change "block" to "blocks"
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.2.2 P 513 L 54 # 2
 Tan , Chik Liang I2R
 Comment Type E Comment Status A
 The phrase "state variable" should be changed to "state variables" to indicate plurality. Because the MPCP Control Instance uses both transmitEnable[n] and transmitInProgress[n] to communicate with the Multiplexing Control.
 SuggestedRemedy
 Change "state variable" to "state variables"
 Proposed Response Response Status C
 ACCEPT.

P802.3ah Draft 1.732 Comments

CI 64 SC 64.2.2.2 P 514 L 34 # 27
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

New Control Mux cannot distinguish between data frame and control frame with same TransmitFrame(...) primitive in Figure 64-11. Therefore there's no need to distinguish DATA/CONTROL values in transmitPending.

SuggestedRemedy

Suggest changing possible values of transmitPending to true/false.
 Change accordingly at P518 L53.

Proposed Response Response Status C

ACCEPT.
 See also 564
 see also 199

CI 64 SC 64.2.3.1 P 517 L 30 # 298
 Glen Kramer Teknovus

Comment Type T Comment Status R

Previously, it was agreed that delay variability through PHY/MAC should be no more than 32 ns. That makes Round-trip time variability of $4 \times 32 = 128$ ns (or 8TQ). But the text states the "guard-threshold" value = 4TQ.

SuggestedRemedy

Change the value of "guard-threshold" constant to 8.

Proposed Response Response Status C

REJECT.
 Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

However, based on the comments merit, impact on the guard threshold is based on 2×32 as receiver delay at ONU and transmitter delay at OLT are corrected by ranging process.

CI 64 SC 64.2.3.1 P 517 L 32 # 28
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

uplink is not the standard term used throughout

SuggestedRemedy

Suggest changing it to upstream.
 Also found in pg 538 line 38

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.2.3.1 P 517 L 33 # 299
 Glen Kramer Teknovus

Comment Type T Comment Status A

1. The text description states that "tail_guard" is measured in TQ, yet in state diagram 64-12 it is used as if it was measured in bytes.
2. If IFG and PCS trailer are mutually exclusive, than IFG should be used only since $\text{sizeof(IFG)} > \text{sizeof(PCS trailer)}$. This makes tail_guard equal to $8+6+6+4+12 = 36$ bytes = (18TQ) instead of 29 bytes as stated in Editor's note

SuggestedRemedy

1. Decide on units for "tail_guard"
- 2 Specify default value for "tail_guard" = 36 bytes (or 18 TQ).

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

1. correct description of tail guard to bytes.
2. As IFG is not period of active IDLE transmission, instead it is period where no MAC transmission occurs, it makes sense that IFG associated with last frame in uplink burst can occur simultaneously with guard band occurring between ONUs. This would satisfy receiver requirement of at least IFG between sequential MAC frames.

Change value of 29 bytes for tail_guard, correcting closing sequence mentioned from TRR to TRRI

CI 64 SC 64.2.3.1 P 547 L 37 # 500
 Maislos, Ariel Passave

Comment Type T Comment Status A

IFG is mutually exclusive with PCS trailer which occupies first section. Value should be 29 instead of 41.

SuggestedRemedy

see comment

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 299 for full solution

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CI 64 SC 64.2.3.2 P 518 L 12 # 3
Tan , Chik Liang I2R

Comment Type E Comment Status A

In reference to the functional description of variable 'localTime', the sentence " it is periodically reset by the sublayer on notification ".

It is not clear which sublayer the sentence is talking about.

SuggestedRemedy

Suggest adding "MPCP sublayer" to replace "sublayer" in the sentence above to clarify matters.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Use instead: "it is periodically reset by the Control Parser on notification .."

CI 64 SC 64.2.3.5 P 519 L 38 # 18
ZHU, ZIJIAN I2R

Comment Type E Comment Status A

The definition MA_DATA.indication in this line should not be deleted. As this message is used by the state diagram in line 12 of page 520. The same problem with the message MA_CONTROL.indication in line 43 of page 519.

SuggestedRemedy

Suggest not deleting line 37-38 and line 43-45. And delete line 47.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.2.3.5 P 519 L 47 # 73
Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status A

This subclause indicates that no messages are defined for the Control Parser functional block. However, Figure 64-6 on Page 516 has a MA_DATA.Indication message.

SuggestedRemedy

Define message MA_DATA.Indication(DA,SA,m_sdu) in this subclause

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Editor would add description.

CI 64 SC 64.2.3.6 P 519 L # 316
Glen Kramer Teknovus

Comment Type T Comment Status A

In state diagram 64-12, the transition from PARSE OPCODE to TRANSMIT READY would result in a loop, since the last frame with an unsupported opcode would be checked continuously.

SuggestedRemedy

The transition should go from PARSE OPCODE state to the GATED state.

Proposed Response Response Status C

ACCEPT.

See 182

P802.3ah Draft 1.732 Comments

CI 64 SC 64.2.3.6 P 520 L 19 # 300
 Glen Kramer Teknovus

Comment Type TR Comment Status A

"timestamp - localTime" is equal to RTT and is ALWAYS larger than guard_threshold of 64 or 128 ns. Thus, timestamp error will be asserted every time and no opcode specific operation will ever be invoked.

SuggestedRemedy

We should not assert timestampError until the ONU has been registered. Specifically, modify the code in RARSE TIMESTAMP state as follows:

```
timestamp = data[17:48]
newRTT = localTime - timestamp
timestampError = registered * (abs(newRTT-RTT) > guard_threshold)
RTT = newRTT
```

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

See 76,74,77,301, 21

Some thoughts on this subject:

- 1) timestampError is calculated by parser
- 2) decision to register/unregister is performed by Discovery Block on receiving this indocation
- 3) Discovery block is aware of registration status, and is also the entity that is capable of deregistering

Add transition based on timeout*registered in fig 64-19 to DEREGISTER state

Add transition based on timeout*registered in fig 64-20 to REMOTE DEREGISTER state

Rename timestampError variable to timestampDrift as Error is misleading

Change content of PARSE TIMESTAMP state in diagram 64-9 to:

```
timestamp = data[16:47]
newRTT = localTime - timestamp
timestampDrift = abs(newRTT-RTT) > guard_threshold
RTT = newRTT
```

CI 64 SC 64.2.3.6 P 520 L 19 # 432
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

The OLT does not need to check the timestamp.

SuggestedRemedy

In Figure 64-9, "timestampError <- if(abs(timestamp - localTime) > guard_threshold)" should be removed. Additionally, TIMESTAMP ERROR state should be removed. If the OLT needs to check the timestamp, RTT should be checked instead of timestamp. For this purpose, the following processes should be enforced in PARSE TIMESTAMP state.

```
timestamp <- data[17:48]
prevRTT = RTT
RTT <- localTime - timestamp
timestampError <- if(abs(RTT - prevRTT) > guard_threshold)
```

Note that in case of REGISTER_REQ, only the following processes should be enforced.

```
timestamp <- data[17:48]
RTT <- localTime - timestamp
```

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Check for error using saved RTT as mentioned instead of timestamp as measurement is incorrect.

See 300 for exact solution

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CI 64 SC 64.2.3.6 P 520 L 19 # 21
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

In the PARSE TIMESTAMP state of Figure 64-9, the timestampError should not be calculate at the first packet received by the OLT from each ONU. There will always be a timestamp error.
 The PARSE TIMESTAMP state of Figure 64-10 on page 521 will have the same problem.

SuggestedRemedy

- In PARSE TIMESTAMP state of Figure 64-9:
 if opcode != REGISTER_REQ
 timestampError <= if(abs(timestamp - localTime)>guard_threshold)
 else
 timestampError <= false
- In PARSE TIMESTAMP state of Figure 64-10:
 if opcode != REGISTER
 timestampError <= if(abs(timestamp - localTime)>guard_threshold)
 else
 timestampError <= false

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 300/301 for exact solutions

CI 64 SC 64.2.3.6 P 520 L 21 # 433
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

This comment is significant if the timestampError is maintained in Figure 64-9. In TIMESTAMP ERROR state, "registered" is updated to false. However, the definition of this variable has been removed.

SuggestedRemedy

The definition of this variable should be described in 64.2.3.2. In this description, it is better to describe that this variable is same as "registered" used in Discovery process. Additionally, the output signal "registered" should be added to Figure 64-6.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 300

CI 64 SC 64.2.3.6 P 520 L 22 # 434
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

This comment is significant if the timestampError is maintained in Figure 64-9. In TIMESTAMP ERROR state, MA_CONTROL.indication() message is issued. However, according to Figure 64-2 and 64-6, the OLT Control Parser cannot issue MA_CONTROL.indication() message.

SuggestedRemedy

The definitions of MA_CONTROL.Indication(timestampError) and MA_CONTROL.Indication(deregistered) should be described in 64.2.3.5. Additionally, "MA_CONTROL.indication()" issued by the Control Parser should be added to Figure 64-2 and 64-6.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 300
 indications are to be generated by the discovery processing block

CI 64 SC 64.2.3.6 P 520 L 24 # 17
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

In Figure 64-9, the condition from PARSE TIMESTAMP to INITIATE MAC CONTROL FUNCTION should not be UCT. This states change could happen only when timestampError is false.

SuggestedRemedy

Change UCT to timestampError = false

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 300

CI 64 SC 64.2.3.6 P 520 L 24 # 435
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

This comment is significant if the timestampError is maintained in Figure 64-9. In the case when timestampError is true, state transits to WAIT FOR RECEIVE via TIMESTAMP ERROR. However, during these state transitions, timestampError is not updated to false.

SuggestedRemedy

At the end of TIMESTAMP ERROR, timestampError should be false.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 436

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CI 64 SC 64.2.3.6 P 521 L 19 # 301
 Glen Kramer Teknovus

Comment Type TR Comment Status A

When the DISCOVERY_GATE is received by uninitialized ONU, the condition `timestampError = if(abs(timestamp-localTime) > guard_threshold)` would almost always be true. On this condition, the execution point will jump to `TIMESTAMP ERROR` state and will never invoke the opcode-specific function. As a result, the ONU will never register.

SuggestedRemedy

We should not assert `timestampError` until the ONU has been registered. Specifically, change `timestamp` check to the following:

`timestampError = registered * ((abs(timestamp - localTime) > guard_threshold)`

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

See 300 for exact solution, using measurement technique as suggested in this remedy:

`timestampDrift = (abs(timestamp - localTime) > guard_threshold`

CI 64 SC 64.2.3.6 P 521 L 21 # 75
 Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status A

In the state "TIMESTAMP ERROR" of Figure 64-10, the first action is to set the variable "registered" to false.

- 1) This variable is deleted in Section 64.2.3.2
- 2) This variable is not indicated in Figure 64-6 on Page 516
- 3) This variable is the result of the Discovery process and should not be set in the Control Parser block.

SuggestedRemedy

Remove action "registered = false"

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Also for 64-9

CI 64 SC 64.2.3.6 P 521 L 22 # 76
 Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status A

In the state "TIMESTAMP ERROR" of Figure 64-10, the 2nd action is to send message `MA_CONTROL.Indication(timestampError)`

- 1) No opcode is associated with "timestampError" in Table 31A-1 on Page 112
- 2) `MA_CONTROL.Indication(timestampError)` primitive is not defined in Annex 31A on page 113-114.
- 3) This message is not indicated in Figure 64-6 on Page 516

SuggestedRemedy

- 1) Assign new opcode for `timestampError` in Table 31A-1 on Page 112
- 2) Define `MA_CONTROL.Indication(timestampError)` primitive in Annex 31A
- 3) Indicate `MA_CONTROL.Indication(timestampError)` in Figure 64-6 on Page 516
- 4) Include definition for message `MA_CONTROL.Indication(timestampError)` in Section 64.2.3.5 on Page 519

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

As `timestampError` is not a message, and no opcode is associated with this. No indication be generated, instead a flag is raised as action is taken by a different block. In the discovery block, when indicating to the client, the status indication should signal that deregistration resulted from a timestamp drift.

CI 64 SC 64.2.3.6 P 521 L 23 # 77
 Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status A

In the state "TIMESTAMP ERROR" of Figure 64-10, the 3rd action is to send message `MA_CONTROL.Indication(deregistered)`.

- 1) No opcode is associated with "deregistered"
- 2) The `MA_CONTROL.Indication(deregistered)` primitive is not defined in Annex 31A on page 113-114.
- 3) This message is not indicated in Figure 64-6 on Page 516

Deregistering process is performed by the Discovery process. The Control Parser can inform the MAC client of the `timestampError` via `MA_CONTROL.Indication(timestampError)` primitive. If the MAC Client decides to deregister the ONU, it can inform the discovery process and the variable "registered" will be set to false.

SuggestedRemedy

Remove action `MA_CONTROL.Indication(deregistered)`

Proposed Response Response Status C

ACCEPT.

Also for 64-9

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CI 64 SC 64.2.3.6 P 521 L 23 # 74
 Yeo, Doreen Institute of Microelectr

Comment Type T Comment Status R

In Figure 64-10, transition from state "PARSE TIMESTAMP" to "INITIATE MAC CONTROL FUNCTION" is "UCT" regardless of whether there is a timestamp error. Should the MAC control function be initiated if there is a timestamp error? If not, the condition for transition should occurs when "timestampError = false".

SuggestedRemedy

If the MAC control function is initiated when there is no timestamp error, change the condition for transition from "UCT" to "timestampError = false"

Proposed Response Response Status C

REJECT.
 Editor believes opcode should be executed as it may contain deregister notification for example.
 Also for 64-9

CI 64 SC 64.2.3.6 P 521 L 24 # 437
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

In the other comment, I propose to add the definition of MA_CONTROL.Indication(deregistered) to 64.2.3.5. By the way, the ONU also issue this message in TIMESTAMP ERROR state. In this case, the ONU should not send any MPCP messages to the OLT.

SuggestedRemedy

In the definition of MA_CONTROL.Indication(deregistered), it is better to add the following description. "If this message is issued in the ONU, the ONU resets all of MPCP related process without sending MPCP messages to the OLT."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 77
 As indication on deregistration was moved from 64-9 and 64-10 there is no longer a need to define this indication in section 64.2.3.6

CI 64 SC 64.2.3.6 P 521 L 24 # 436
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

In Figure 64-10, in the case when timestampError is true, state transits to WAIT FOR RECEIVE via TIMESTAMP ERROR. However, during these state transitions, timestampError is not updated to false.

SuggestedRemedy

At the end of TIMESTAMP ERROR, timestampError should be false.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 300 for transition on actions based on timestampDrift.
 timestampDrift variable should be set to false at WAIT FOR RECEIVE state
 Also for 64-9

CI 64 SC 64.2.3.6 P 522 L 18 # 564
 Chan Kim ETRI

Comment Type T Comment Status A

Select() should constantly be performed until transmitEnable becomes true. and transmitPending variable can have DATA or CONTROL according to the variable definition. (though multiplexing control doesn't care it's data or control)

SuggestedRemedy

- 1.move Select() function and transmitPending assignment to 'WAIT FOR TRANSMIT' state so that it can be perform until transmitEnable becomes true.
2. and Change transmitPending <= DATA to transmitPending <= DATA or CONTROL

Proposed Response Response Status C

- ACCEPT IN PRINCIPLE.
1. see 198
 2. see comment #27 for proposal to change DATA or Control to true/false

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CI 64 SC 64.2.3.6 P 523 L # 182
 Yoshimura, Minoru NEC
 Comment Type T Comment Status A
 Figure64-12
 When "Length/Type=MAC Control" and "opcode != {supported opcode}", we will continue to loop perpetually between "TRANSMIT READY" state and "PARSE OP CODE" state.
 SuggestedRemedy
 When we are in "PARSE OP CODE" state and "opcode != {supported opcode}", we should return to "GATED" state.
 Proposed Response Response Status C
 ACCEPT.
 See 316

CI 64 SC 64.2.3.6 P 537 L 43 # 25
 ZHU, ZIJIAN I2R
 Comment Type T Comment Status A
 The default registered value for OLT is also false. Refer to line 8 in Figure 64-19 on page 543, the registered is used to indicate whether each corresponding ONU is registered.
 SuggestedRemedy
 DEFAULT VALUE: false
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3 P 523 L 49 # 22
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 As there will be no OMP block in the draft, the caption in this line should be changed accordingly.
 SuggestedRemedy
 Suggest changing the caption "Optical Multi-Point" in line 49 to "MPCP functional blocks" or other readable names. And change "Optical Multi-Point functional block" in line 51 and all those in page 524 accordingly.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Use 'Multi-Point Control' for 64.3 title
 Use 'Multi-Point Control Protocol' for 64.4 title

CI 64 SC 64.3.10 P 545 L 19 # 15
 Gan, Xiaodan IME
 Comment Type E Comment Status A
 In figure 64-21, there is not variable "registered" as an input to the Report Processing. However, in the Report Processing state diagram at ONU (figure 64-23, page 547) the variable "registered" is used. Is it required for the Report Processing ?
 SuggestedRemedy
 If it is required, add the variable "registered" as an input to the Report Processing (figure 64-21, page 545).
 Proposed Response Response Status C
 ACCEPT.
 Technical not Editorial

CI 64 SC 64.3.10.5 P 519 L 24 # 6
 Tan , Chik Liang I2R
 Comment Type E Comment Status A
 There appears to be a spelling error.
 Change the word " invoced " to "invoked".
 SuggestedRemedy
 This also occurs in several other places :
 Pg 540 Line 5 Subclause 64.3.9.5
 Pg 546 Line 36 Subclause 64.3.10.5
 Pg 552 Line 23 Subclause 64.3.11.5
 Proposed Response Response Status C
 ACCEPT.

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CI 64 SC 64.3.10.5 P 546 L 15 # 305
 Glen Kramer Teknovus

Comment Type T Comment Status A

"'0' or false indicates that the corresponding queue is empty while '1' or true indicates that the queue has some data."

This is not exactly correct. '0' indicates that the corresponding 'status' field is not present, and '1' indicates that the 'status' field is present.

SuggestedRemedy

Change the above sentence to

"'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)."

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 64 SC 64.3.10.6 P 547 L 30 # 7
 Tan , Chik Liang I2R

Comment Type E Comment Status A

Figure 64-23.

The variable registered is not listed in the Variables list in the service interface. Should it be added in?

SuggestedRemedy

Since the functional definition of 'registered' appears in the service interface of Discovery Processing and the Control Parser/Multiplexer, suggest adding it to Report Processing and Gate Processing which are both also using the variable.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.11.2 P 549 L 23 # 9
 Tan , Chik Liang I2R

Comment Type E Comment Status A

Spelling error in the line.

"varibale" should be "variable"

SuggestedRemedy

Change "varibale" to "variable"

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.11.2 P 550 L 35 # 45
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

IDLETime is called syncTime in Figure 64-27.

SuggestedRemedy

Rename to syncTime, which is more appropriate

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.11.3 P 550 L 45 # 46
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

empty(list)

This function is use to check wheter list is an empty list. ...

SuggestedRemedy

Suggest changing it to

This function is use to check whether the list is empty. When there are no elements queued in the list, the function returns true. Otherwise,...

Proposed Response Response Status C

ACCEPT.

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CI 64 SC 64.3.11.3 P 550 L 48 # 48
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

"insert_sorted_list(list, element)

This function is use to queue the element structure element inside the list list. The queueing order is sorted." is a bit ambiguous.

SuggestedRemedy

Suggest changing it to

This function is use to queue the element according to its priority within the list of sorted elements.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.11.3 P 551 L 1 # 47
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

Functions IsUnicast(MACAddress) and IsBroadcast(.) used in Figure 64-27 are not defined here.

Why not check LLID instead which is only 2octets.

SuggestedRemedy

IsUnicast(LLID)

This function is used to check whether the 2 octet LLID represents is unicast. The function returns the value true when LLID is unicast according to the definitions in Clause 65, and false otherwise.

IsBroadcast(MACAddress)

This function is used to check whether the 2 octet LLID represents is broadcast. The function returns the value true when LLID is broadcast according to the definitions in Clause 65, and false otherwise.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Definitions for the functions IsUnicast and IsBroadcast shall be added by the editor However, reliance on the LLID is not correct as both cases use broadcast LLID and occur prior to registration.

IsUnicast shall rely on the unicast/broadcast nature of the MAC address

CI 64 SC 64.3.11.3 P 551 L 2 # 50
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

double "list "

SuggestedRemedy

Remove one of them.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Use instead the following text to reduce confusion:

InsertInOrder(sorted_list, inserted_element)

This function is used to queue an element inside a sorted list.

The queueing order is sorted. In the condition that the list is full the element shall be discarded.

The length of the list is dynamic and it's maximal size equals the value advertised during registration as maximum number of pending grants.

RemoveHead(sorted_list)

This function is used to dequeue an element from the head of a sorted list.

The return value of the function is the dequeued element.

PeekHead(sorted_list)

This function is used to check the content of a sorted list.

It returns the element at the head of the list without dequeuing the element.

CI 64 SC 64.3.11.5 P 552 L 23 # 567
 Chan Kim ETRI

Comment Type E Comment Status A

typo. invoced => invoked.

SuggestedRemedy

correct it.

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 64 SC 64.3.11.6 P 554 L 15 # 51
 ZHU, ZIJIAN I2R
 Comment Type T Comment Status A
 Figure 64-25
 When the first Gate is sent, OLT should set initialGate=true so that Discovery process in Figure64-19 can start ONU_timer.
 SuggestedRemedy
 Suggest in state SEND GATE, set initialGate=true after sending GATE.
 Proposed Response Response Status C
 ACCEPT.
 See 53

CI 64 SC 64.3.11.6 P 554 L 32 # 440
 Murakami, Ken Mitsubishi Electric
 Comment Type T Comment Status A
 In Figure 64-26, the process "IDLE time <- Sync Time in Discovery GATE" is not indicated.
 SuggestedRemedy
 At the beginning of INCOMING GRANT state, the ONU should check the discovery flag. If this flag is sed to 1, the above process should be enforced.
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.11.6 P 554 L 34 # 24
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 1024 is not very informative. Suggest changing it to a constant name.
 SuggestedRemedy
 Suggest changing it to min_prep_time or min_processing_time and adding the constant to 64.3.11.1 Constant section
 min_processing_time
 This constant is the time required for the ONU processing time.
 TYPE: 32 bit unsigned
 VALUE: 00-00-04-00 (16.384 us)
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.11.6 P 554 L 35 # 431
 Murakami, Ken Mitsubishi Electric
 Comment Type T Comment Status A
 This comment is a part of #143 on Draft1.414. In the final response to #143, #719 should be referred as the combined complete solution. However, IPG is not considered at the length check of grant.
 SuggestedRemedy
 I again propose as follows. In Figure 64-26, "(length[i] > laser_on_time + IDLE_time + laser_off_time)" should be "(length[i] > laser_on_time + IDLE_time + laser_off_time + IPG)".
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 As IPG can overlap with laser_off_time, equations should replace IPG with tail_guard

CI 64 SC 64.3.11.6 P 555 L # 307
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 Missing text descriptions for functions "IsBroadcast()" and "IsUnicast()";
 SuggestedRemedy
 1. Add text descriptions
 2. Perhaps only "IsBroadcast()" function is needed. "IsUnicast()" is equivalent to "IsBroadcast()".
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Editor would add definitions for IsBroadcast, IsUnicast shall be removed.
 See 47, 310

CI 64 SC 64.3.11.6 P 555 L # 306
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 The same function is "remove_list" in text and "remove_head" and "RemoveList" in state diagram.
 SuggestedRemedy
 Use consistent naming for this and other functions:
 RemoveHead(...)
 PeekHead(...)
 InsertInOrder(...)
 Proposed Response Response Status C
 ACCEPT.
 See 506

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CI 64 SC 64.3.11.6 P 555 L # 311
 Glen Kramer Teknovus

Comment Type T Comment Status A

Transitions from CHECK GATE TYPE state do not cover the complete input space. For example, what happens when a broadcast Discovery Gate is received, but this ONU is already registered?

SuggestedRemedy

Add a transition marked "else" from "CHECK GATE TYPE" to "WAIT FOR GATE"

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Move to WAIT FOR GRANT state

CI 64 SC 64.3.11.6 P 555 L # 312
 Glen Kramer Teknovus

Comment Type E Comment Status A

Typos:

1. line 22: missing bracket after laserONTime
2. line 28: should be insideDiscoveryWindow
3. line 35: should be insideDiscoveryWindow
4. line 44: should be localTime

SuggestedRemedy

Fix per comment.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.11.6 P 555 L 15 # 441
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

The time order between the timing when the ONU receives the Normal GATE for the REGISTER_ACK and that when "registered" becomes true as the result of the MA_CONTROL.request(REGISTER_ACK) in the ONU cannot be guaranteed. Therefore, according to the state transit condition from CHECK GATE TYPE to TURN LASER ON in Figure 64-27, it is possible that the ONU cannot receive the Normal GATE for REGISTER_ACK.

SuggestedRemedy

To guarantee that the ONU can receive the Normal GATE for REGISTER_ACK, I propose to add a new variable "firstGate". Actual modifications are as follows.

(1) "firstGate" should be added as an output signal to Figure 64-16.

(2) Add the definition of "firstGate" in 64.3.7.2 as follow.

firstGat

This variable is used for indication o firstGating. It is set to true following th receipt of REGISTER(Ack) at the ON

TYPE: boolea

DEFAULT VALUE: fals

(3) Add the following processes in Figure 64-20.

firstGate<-false in WAI

firstGate<-true in REGISTER PENDIN

(4) "firstGate" should be added as an input signal to Figure 64-24.

(5) Add the definition of "firstGate" in 64.3.9.2 as shown in (2).

(6) Change the state transition condition from CHECK GATE TYPE to TURN LASER ON in Figure 64-27 as follows.

(currentGrant.discovery = false) * registered + (currentGrant.discovery = true) * (IsUnicast(DA)) * (DA = ONU's MAC address) * !registered

(currentGrant.discovery = false) * (firstGate or registered) +

(currentGrant.discovery = true) * IsUnicast(DA)) * (DA = ONU's MAC address) *

!registered

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Perhaps a simple reordering between the two operations is the REGISTERED state in figure 64-20 is sufficient to solve problem.

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CI 64 SC 64.3.11.6 P 555 L 15 # 308
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 In state RANDOM WAIT, the variable "length" should be "currentGrant.length"
 SuggestedRemedy
 Change "length" to "currentGrant.length"
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.11.6 P 555 L 16 # 309
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 1. syncTime is measured in TQ as well as maxDelay and length. No invocation of "sizeof(...)" is needed.
 2. preamble and IFG is measured in bytes, so we need a conversion "timeOf(...)"
 SuggestedRemedy
 1. Introduce a function "timeOf()" that takes bytes and returns a value in TQ.
 2. Change maxDelay calculation to the following:
 "maxDelay = currentGrant.length - laserONTime - syncTime - timeOf(MPCPDU) - timeOf(tail_guard) - laserOFFTime"

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Conversion should be performed to byte metric to allow for more accurate measurement.
 Change formula in state RANDOM WAIT (figure 64-27) to read:
 maxDelay = TQ_size*(currentGrant.length - laserOnTime - syncTime - laserOffTime) - SizeOf(MPCPDU) - tail_guard
 add definition for TQ_size to 64.2.3.1 as:
 TQ_size
 This constant holds the size in octets of a time_quanta.
 TYPE: integer
 VALUE: 2

CI 64 SC 64.3.11.6 P 555 L 16 # 310
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 check (IsUnicast(DA) * (DA=ONU's MAC address) is a duplication
 SuggestedRemedy
 Remove (DA=ONU's MAC address)
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Not exactly duplicate. Component that should be removed is check for unicast, as this is inferred from matching the ONU MAC address which always is a unicast address.

CI 64 SC 64.3.11.6 P 555 L 34 # 442
 Murakami, Ken Mitsubishi Electric
 Comment Type E Comment Status A
 Typo
 SuggestedRemedy
 In Figure 64-27, "nsideDiscoveryWindow" should be replaced with "insideDiscoveryWindow".
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.11.6 P 555 L 35 # 10
 Tan , Chik Liang I2R
 Comment Type E Comment Status A
 Figure 64-27
 Spelling errors in the state 'STOP TX'
 Change "nsideDiscvoeryWindow" to "insideDiscoveryWindow".
 SuggestedRemedy
 See above.
 Proposed Response Response Status C
 ACCEPT.

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CI 64 SC 64.3.11.6 P 555 L 35 # 443
 Murakami, Ken Mitsubishi Electric
 Comment Type E Comment Status A
 In Figure 64-27, "else initialGate <- true" has no meaning.
 SuggestedRemedy
 Remove this process.
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.11.6 P 555 L 35 # 53
 ZHU, ZIJIAN I2R
 Comment Type T Comment Status A
 Figure 64-27
 initialGate mechanism is used at OLT only for proper start of ONU_timer. It is of no use at ONU.
 SuggestedRemedy
 Delete in state STOP TX "else initialGate=true".
 Proposed Response Response Status C
 ACCEPT.
 Move initialGate=true to state SEND GATE in figure 64-25
 see 51

CI 64 SC 64.3.11.6 P 555 L 36 # 313
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 "else" without "if"
 SuggestedRemedy
 Perhaps the fix should be the following:

 initialGate = false
 if(insideDiscoveryWindow)
 initialGate = true // set for the next gate

 insideDiscoveryWindow = false
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

 With the exception of initialGate that shall be removed
 See 53

CI 64 SC 64.3.11.6 P 555 L 39 # 16
 Gan, Xiaodan IME
 Comment Type T Comment Status A
 In figure 64-27, the Gate Processing should check the status of the variable "registered" when it checks if the grantList is empty. If the ONU is deregistered the Gate Processing needs to flush the grantList and not to enter the state of START TX.
 SuggestedRemedy
 Add variable "registered" checking and corresponding action in the Gate Processing state diagram of ONU (figure 64-27).

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 To diagram 64-26 add FLUSH state.
 Transition based on registered=false enters state.
 Action in state:
 while (!empty(grantList))
 removeHead(grantList)

 UCT transition to WAIT state

 Also for state INCOMING GRANT grants with discovery flag should be queues only when the ONU is not registered.

 Add to introduction text at 64.3.11 the following:
 "When registered, the ONU ignores all gate messages where the discovery flag is set."

CI 64 SC 64.3.11.6 P 555 L 42 # 314
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 1. Transitions from state CHECK NEXT GRANT are not mutually exclusive.
 2. condition "stopTime = localTime" is always true when the state CHECK NEXT GRANT is active. Specifying it as transition label makes no sense.
 SuggestedRemedy
 Replace "stopTime = localTime" by "else"
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 See 444

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CI 64 SC 64.3.11.6 P 555 L 44 # 444
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

In Figure 64-27, according to the current branch conditions from CHECK NEXT GRANT, even if the discovery grant overlaps with the previous grant, state transits to LASER OFF. This is not correct. Additionally, in the case when the laser off period of the current grant overlaps with the laser on time of the next grant, the next grant should be treated as B2B grant for the effective usage of PON bandwidth.

SuggestedRemedy

Change the branch conditions from CHECK NEXT GRANT as follows.
 (nextStopTime <= stopTime) + ((nextGrant.start <= stopTime + laserOffTime) * (nextGrant.discovery = true)) --> HIDDEN GRANT
 (nextStopTime > stopTime) * (nextGrant.discovery = false) * (nextGrant.start <= stopTime + laserOffTime) --> B2B GRANT
 (nextStopTime > stopTime) * (nextGrant.start > stopTime + laserOffTime) --> LASER OF
 According to the above branch conditions, the discovery grant that overlaps with the previous grant is discarded.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 314
 use else as transition to LASER OFF state.

CI 64 SC 64.3.11.6 P 555 L 48 # 505
 Miyoshi, Hidekazu SEI

Comment Type T Comment Status A

In figure 64-27, there is a state called HIDDEN GRANT where the current grant is removed. However, in this case the next grant also needs to be removed.

SuggestedRemedy

Add "RemoveList(grantList, nextGrant)" in HIDDEN GRANT.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 As currentGrant is removed from head in state WAIT FOR START TIME; in states HIDDEN GRANT and B2B GRANT actions that need to be performed are:
 in HIDDEN GRANT state:
 RemoveHead(grantList)
 in B2B GRANT state:
 currentGrant = RemoveHead(grantList)
 stopTime = nextStopTime

RemoveList function definition should be replaced with RemoveHead function definition

CI 64 SC 64.3.11.6 P 555 L 48 # 506
 Miyoshi, Hidekazu SEI

Comment Type T Comment Status A

The RemoveList function is used in HIDDEN GRTANT and B2B GRANT in figure 64-27. But the name, RemoveList(), is inconsistent with the expression, remove_list(), used in 64.3.11.3

SuggestedRemedy

Change RemoveList() to remove_list() in figure 64-27, or change remove_list() to RemoveList() in 64.3.11.3

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Choose upper case function names
 See 306

CI 64 SC 64.3.2.1 P 547 L 46 # 501
 Maislos, Ariel Passave

Comment Type E Comment Status A

Ues VALUE instead of DEFAULT VALUE for constants

SuggestedRemedy

see comment, also fix throughout clasue

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.6 P 533 L # 319
 Glen Kramer Teknovus

Comment Type T Comment Status R

"At the OLT the [MPCP] counter shall track the transmit clock, while at the ONU the counter shall track the receive clock"

The above approach is not standard-compliant since no interface exists that allows the Rx clock to propagate through MAC to MAC Control.

Frequency-locking the Tx clock to the Rx clock in the ONU is not necessary.

SuggestedRemedy

1. MPCP should synthesize the clock from the incoming timestamps.
2. Let the Tx clock be free running

Proposed Response Response Status C

REJECT.
 Compliance is created by writing a standard, as we do here.
 When not synchronizing the timestamps, as shown in the past the guard band needs to be increased significantly.

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CI 64 SC 64.3.6 P 533 L 47 # 5
Tan , Chik Liang I2R

Comment Type E Comment Status A

In reference to the functional description of the variable 'localTime', the sentence " It is periodically reset by the functional block on notification of the existence.... ".

It is unclear which functional block this sentence is referring to.

SuggestedRemedy

Suggest placing "MPCP functional block " into the sentence instead to clarify matters.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
See 3 for exact text

CI 64 SC 64.3.9 P 535 L 27 # 502
Miyoshi, Hidekazu SEI

Comment Type E Comment Status A

In figure 64-14, the order of DA and SA fields in the second GATE is different from others.

SuggestedRemedy

Swap the fields as follows.

GATE{,,, SA=OLT MAC address, DA=MAC control,,,}
-> GATE{,,, DA=MAC control, SA=OLT MAC address,,,}

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9 P 536 L 12 # 11
Gan, Xiaodan IME

Comment Type E Comment Status A

In figure 64-15, variable "initialGate" is an input to the Discovery Processing of OLT. But it is not appeared in the Discovery Processing of ONU (figure 64-16). However, in the Gate Processing State Diagram at OLT (figure 64-25, page 554) the variable "initialGate" is not set a value anywhere. Only the Gate Processing state diagram at ONU (figure 64-27, page 555) uses this variable. It is not matching and clear.

SuggestedRemedy

Please clarify and make the variable "initialGate" corresponding between Discovery Processing and Gate Processing for OLT or ONU.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9 P 536 L 16 # 44
ZHU, ZIJIAN I2R

Comment Type E Comment Status A

OPCODE should be in lower case since it is a variable.

SuggestedRemedy

Also found in other figures.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.1 P 536 L 44 # 29
ZHU, ZIJIAN I2R

Comment Type E Comment Status A

Constant broadcast_ID is not used in any discovery state diagram.

SuggestedRemedy

Suggest removing constant definition of broadcast_ID and add in Clause 65.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.1 P 536 L 50 # 32
ZHU, ZIJIAN I2R

Comment Type E Comment Status A

After merging discovery processing ONU window setup diagram into gate processing ONU activation diagram, constants laser_on_time and laser_off_time are not used in any discovery state diagram.

SuggestedRemedy

Suggest removing constant definition of laser_on_time and laser_off_time

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.1 P 537 L 16 # 35
ZHU, ZIJIAN I2R

Comment Type E Comment Status A

After merging discovery processing ONU window setup diagram into gate processing ONU activation diagram, variable IDLE_Time is not used in any discovery state diagram.

SuggestedRemedy

Suggest removing variable definition of IDLE_Time.

Proposed Response Response Status C

ACCEPT.

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CI 64 SC 64.3.9.1 P 537 L 48 # 36
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 After merging discovery processing ONU window setup diagram into gate processing ONU activation diagram, function is_unicast is not used in any discovery state diagram.
 SuggestedRemedy
 Suggest moving function definition of IsUnicast to Gate processing P550.
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.2 P 537 L # 317
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 Not clear what is the reason to make the default value for 'register' variable false in ONU, but true in OLT.
 SuggestedRemedy
 Set the default value for 'register' variable to false in both ONU and OLT.
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.2 P 537 L 19 # 503
 Miyoshi, Hidekazu SEI
 Comment Type T Comment Status A
 The IDLE_Time variable is set by not only Discovery GATE but also REGISTER. In addition the brief explanation of Discovery GATE in this sentence is not necessary.
 SuggestedRemedy
 Modify the sentence as indicated below.
 "This value is set following receipt of Discovery GATE and REGISTER, and is indicated in Sync time fields in the messages."
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.2 P 537 L 43 # 183
 Yoshimura, Minoru NEC
 Comment Type T Comment Status A
 Default value of variable "registered" for OLT should be "false".
 And "registered=true" should be added in "REGISTERED"state in Figure64-19.
 SuggestedRemedy
 Same as comment.
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.3 P 538 L 1 # 302
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 1. Random function is not used in discovery processing any more.
 2. Timer "random_delay_timer" in discovery processing any more.
 SuggestedRemedy
 1. Move the description of "random()" to sub-clause 64.3.11.3 (functions related to Gate processing)
 2. Move the description of "random_delay_timer" to sub-clause 64.3.11.4 (timers related to Gate processing)
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.4 P 538 L 28 # 507
 Miyoshi, Hidekazu SEI
 Comment Type T Comment Status A
 At the end of a burst for upstream traffic, IFG is not necessary. Only the closing sequence (/T/R/R/) is required. However random_delay_timer includes the IFG size. In the same reason, IFG should not be included for the calculation of maxDelay in the RANDOM WAIT state in figure 64-27.
 SuggestedRemedy
 Change the sentence.
 "...less the IPG size." -> "...less the closing sequence."
 Get rid of "-IFG" from the RANDOM WAIT state in Figure 64-27.
 Proposed Response Response Status C
 ACCEPT.
 See 508

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CI 64 SC 64.3.9.4 P 538 L 28 # 8
 Tan , Chik Liang I2R
 Comment Type E Comment Status A
 Wrong word. "..IPG size." should be IFG size.
 SuggestedRemedy
 Suggest changing IPG to IFG
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.4 P 538 L 29 # 303
 Glen Kramer Teknovus
 Comment Type T Comment Status A
 "The timer value is set dynamically based on the parameters passed from the client."
 This statement is not accurate as there are no parameters passed from the client to set the random delay timer.
 SuggestedRemedy
 Change the above sentence to
 "The timer value is set dynamically based on the parameters received in a DISCOVERY GATE message".
 Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.4 P 538 L 40 # 508
 Miyoshi, Hidekazu SEI
 Comment Type T Comment Status A
 When REGISTER_REQ is sent by an ONU, IFG does not have to be included in the end of the transmission.
 SuggestedRemedy
 Get rid of "IFG" from the sentence.
 Change the total value to 75 bytes (600nsec).
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Should be tail_guard instead of clsing sequence, and remove IFG
 This should be 75 bytes, (38 TQ value for the timer)

CI 64 SC 64.3.9.5 P 539 L 16 # 56
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 MA_CONTROL.indication(DA, gate.discovery, start_time, grant_length, length) is shown in figure 64-16 line 23 but not mentioned in this paragraph.
 SuggestedRemedy
 Suggest adding
 MA_CONTROL.indication(DA, gate.discovery, start_time, grant_length, length)
 The service indication used at the ONU indicates to the client the existence of a discovery window. .. Copy from line 19 to 36.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Change to just "gate" indication

CI 64 SC 64.3.9.5 P 539 L 17 # 26
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status R
 The message name MA_CONTROL.request(DA, register, ...) in this line should be changed according to the service primitive name in line 6 of page 536, which is MA_CONTROL.request(gate,discovery).
 SuggestedRemedy
 Suggest changing the message name of this line to:
 MA_CONTROL.request(DA, gate_discovery, start_time, grant_length, length). And also change in line 11 of Figure 64-17, page 541.
 Proposed Response Response Status C
 REJECT.

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CI 64 SC 64.3.9.5 P 539 L 38 # 33
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

MA_CONTROL.request(register_ack, registerStatus) definition is found in the figure 64-20 but not in the definition.

SuggestedRemedy
 Suggest adding

MA_CONTROL.request(register_ack, registerStatus)
 The service primitive is used by the client at ONU to indicate whether the OLT has accept or deny the register request.
 The parameter status holds the value accept or deny

Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.5 P 539 L 39 # 12
 Gan, Xiaodan IME

Comment Type E Comment Status A

According to the Discovery Processing Service Interface (OLT)(figure 64-15, page 536) the service primitive MA_CONTROL.request(register_ack) is not used by the client at the OLT. However, it is used by the Discovery Processing of ONU (figure 64-16, page 536).

SuggestedRemedy
 Change the sentence at line 39 to
 "The service primitive used by the client at the ONU to acknowledge register."

Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.5 P 539 L 42 # 42
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

MA_CONTROL.indication(register, status) definition is found in figure 64-20 but not in the definition.

SuggestedRemedy
 Suggest adding

MA_CONTROL.indication(register, status)
 The service indication is issued by the discovery process at the ONU to notify the client and layer management that the ONU registration is unsuccessful.
 The parameter status holds the value denied or deregistered.

Alternatively, can merge with the ONU primitive MA_CONTROL.indication(register, SA, ID, status, RTT)

Proposed Response Response Status C
 ACCEPT.

CI 64 SC 64.3.9.5 P 539 L 42 # 38
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

MA_CONTROL.indication(register, SA, ID, status, RTT) definition is found in figure 64-20 but not in the definition.

SuggestedRemedy
 Suggest adding

MA_CONTROL.indication(register, SA, ID, status, RTT)
 The service indication is issued by the discovery process at the ONU to notify the client that the registration process is completed.
 The parameter status holds the value accepted.
 Remove the reference to ONU.

Alternatively, can modify the existing primitive to
 MA_CONTROL.indication(register_ack(OLT)|register(ONU), SA, ID, status, RTT)
 The parameter status .. -> OLT status ...
 ONU status: accepted

Proposed Response Response Status C
 ACCEPT.

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CI 64 SC 64.3.9.5 P 539 L 43 # 13
 Gan, Xiaodan IME

Comment Type E Comment Status A

According to the Discovery Processing Service Interface at page 536, the service indication MA_CONTROL.indication(register_ack) is only used by the Discovery Processing at the OLT.

SuggestedRemedy

To delete "or at the ONU" in the sentence at line 43 of page 539.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.5 P 539 L 6 # 40
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A

MA_CONTROL.indication(register_req, status) definition is found in figure 64-20 but not in the definition and figure 64-16.

SuggestedRemedy

Suggest adding

MA_CONTROL.indication(register_req, status)

The service indication is issued by the discovery process at the ONU to notify the client and layer management that the ONU needs to retry at the next registration process. The parameter status holds the value retry.

Alternatively, can modify the existing primitive to

MA_CONTROL.indication(register_req, SA(OLT), ID(OLT), status, RTT(OLT))

The parameter status .. -> OLT status ...

ONU status: retry

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.5 P 543 L 11 # 31
 ZHU, ZIJIAN I2R

Comment Type TR Comment Status A

The message MA_CONTROL.request(DA,register,ID,registerStatus) in this line is not defined anywhere.

SuggestedRemedy

Suggest add the definition of this message in page 539 as the following:

MA_CONTROL.request(DA,register,ID,registerStatus)

The service primitive used by the client at the OLT to initiate acceptance of an ONU. The parameter ID holds the LLID assigned by the client. The parameter reisterStatus holds the values accept, or deny.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.6 P 537 L # 318
 Glen Kramer Teknovus

Comment Type T Comment Status A

Upon local deregistration in an ONU, a REGISTER_ACK(flag=success) will be transmitted, which is an undesirable side-effect.

SuggestedRemedy

Split REGISTERED state into REGISTER ACK and REGISTERED state.

In REGISTER ACK state send REGISTER_ACK(flag=success) and UCT to REGISTERED.

Transition from LOCAL DEREGISTER should go to REGISTERED state.

Proposed Response Response Status C

ACCEPT.

Also 41

CI 64 SC 64.3.9.6 P 543 L 10 # 184
 Yoshimura, Minoru NEC

Comment Type T Comment Status A

"MA_CONTROL.request(DA,register,start_time,grant_length,length)" is defined in 64.3.9.5.

But "MA_CONTROL.request(DA,register,ID,registerStatus)" used in Figure 64-19 differs from this definition in 64.3.9.5.

SuggestedRemedy

Modify the definition of "MA_CONTROL.request" in 64.3.9.5

Proposed Response Response Status C

ACCEPT.

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CI 64 SC 64.3.9.6 P 543 L 11 # 14
 Gan, Xiaodan IME

Comment Type T Comment Status A

In figure 64-19, the service primitive MA_CONTROL.request(DA, register, ID, registerStatus) is used. But it can not be found in the messages defined in sub-clause 64.3.9.5. Also there is already a service primitive MA_CONTROL.request(DA, register, start_time, grant_length, length) is used in the Discovery Processing state diagram of OLT (figure 64-17, page 541). These two service primitives use same "register" as opcode but have different request_operand_list.

SuggestedRemedy

Add the message description of MA_CONTROL.request(DA, register, ID, registerStatus) in the sub-clause 64.3.9.5.
 Change MA_CONTROL.request(DA, register, start_time, grant_length, length) to MA_CONTROL.request(DA, discovery_gate, start_time, grant_length, length).

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Use gate primitive with discovery flag set instead of discover_flag for second part.

CI 64 SC 64.3.9.6 P 543 L 13 # 49
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

Figure 64-19
 initialGate should be set false when start registration or reregister but not found.

SuggestedRemedy

Suggest in state REGISTER, set initialGate=false at entry.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.6 P 543 L 20 # 430
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

This comment is a part of #136 on Draft1.414. In the final response to #136, #700 should be referred. In #700, the start timing of ONU_timer has been clarified. However, the timing to send the Normal GATE following the REGISTER has not been clarified.

SuggestedRemedy

I again propose to add the following assumption to Figure 64-19. "The MAC Control Client issues the grant following the REGISTER message, taking the ONU processing delay of REGISTER message into consideration."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Add a note to diagram 64-19 with the wording:
 "The MAC Control Client issues the grant following the REGISTER message, taking the ONU processing delay of REGISTER message into consideration."

CI 64 SC 64.3.9.6 P 543 L 23 # 438
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

"initialGate" used in Figure 64-19 is the input signal from the Gate process and indicates that the first normal GATE following the REGISTER has been sent. However, no process to update "initialGate" is shown in the Gate process.

SuggestedRemedy

The following processes should be added to Figure 64-25.
 "initialGate" should be set to false at BEGIN.
 If the discovery flag is 0 and "initialGate" is false, "initialGate" should be updated to true in SEND GATE state.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Add INIT state where initialGate is set to false, transitioning into state by BEGIN variable.
 Transition from INIT to WAIT is UCT

CI 64 SC 64.3.9.6 P 543 L 42 # 304
 Glen Kramer Teknovus

Comment Type T Comment Status A

"statue" should be called "registerStatus"

SuggestedRemedy

change "statue" to "registerStatus"

Proposed Response Response Status C

ACCEPT.

P802.3ah Draft 1.732 Comments

CI 64 SC 64.3.9.6 P 543 L 45 # 565
 Chan Kim ETRI

Comment Type T Comment Status A
 Definition of mpcp_timer_done is missing.
 the transition condition from the REGISTERED state to DEREGISTER state doesn't clearly
 indeicate that something was received.

SuggestedRemedy
 change '... + (OPCODE=REGSITER_REQ*flag=deregister)'
 to '... + invocation(OPCODE=REGSITER_REQ*flag=deregister)'. (or invoked(...))

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Editor would add reference to mpcp_timer_done
 change references from OPCODE to opcode for consistency with 64-9 and 64-10

CI 64 SC 64.3.9.6 P 543 L 45 # 37
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A
 Figure 64-19
 Transition criterion (OPCODE = REGISTER_REQ * flags = deregister) is misleading.

SuggestedRemedy
 Change to (OPCODE = REGISTER_REQ) * (flags = deregister)

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Use (opcode = REGISTER_REQ) * (flags = deregister)

CI 64 SC 64.3.9.6 P 544 L # 185
 Yoshimura, Minoru NEC

Comment Type T Comment Status A
 If we follow Figure64-20, unnecessary "REGISTER_ACK" will be send out in
 "REGISTERED"state after "REGISTER_REQ,register=false" in "LOCAL DEREGISTER"state.
 REGISTER_ACK should not be send out in this case.

SuggestedRemedy
 We should move from "LOCAL DEREGISTER" to "REMOTE DEREGISTER" after waiting for
 "OPCODE=REGISTER*flag=deregister"

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 See 318 for exact solution

CI 64 SC 64.3.9.6 P 544 L 10 # 54
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A
 MA_CONTROL.indication(DA, gate.discovery, start_time, grant_length, length) is missing
 from the diagram

SuggestedRemedy
 Suggest adding it to the REGISTERING process.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Indication is perfomed in diagram 64-27 state START TX
 indication should add filed for signaling value of discovery flag.
 Value should also be updated in section 31A.

CI 64 SC 64.3.9.6 P 544 L 18 # 504
 Miyoshi, Hidekazu SEI

Comment Type T Comment Status R
 In figure 64-20, there is MA_CONTROL.request() going from the REGISTER_REQ state to
 the WAIT state. I don't think this is necessary. The reason for this is that without this
 transition, we still have two chances of deregistration after sending REGISTER_REQ.
 Removing this sequence can simplify the state diagram without any harm to functionality.

SuggestedRemedy
 Get rid of this MA_CONTROL.request().

Proposed Response Response Status C
 REJECT.
 This primitive is used by the client to indicate to the ONU that it should stop attempting to
 register, otherwise a continuous loop is perfomed between states REGISTER_REQ and
 RETRY until the ONU is registered sucessfully.

P802.3ah Draft 1.732 Comments

CI 64 SC 64.3.9.6 P 544 L 20 # 566
 Chan Kim ETRI

Comment Type T Comment Status A

The transition condition from the REGISTER_REQ state doesn't clearly indicate the invocation occruing from the message reception.

SuggestedRemedy

change 'OPCODE=REGSITER*flag=Ack' to 'invocation(OPCODE=REGSITER*flag=Ack)'.
 The same can be applied for similar cases.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Follwing discussion at Ottawa meeting, it was concluded that transition based on opcode variable as set during parsing of frames in Control Parser is sufficient indication of operation to be performed. There is no need to add special invocation function.
 OPCODE use to be changed to opcode to be consistant with use in figures 64-9 and 64-10

CI 64 SC 64.3.9.6 P 544 L 23 # 439
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

In Figure 64-20, the process "IDLE time <- Sync Time in REGISTER" is not indicated.

SuggestedRemedy

The above process should be added to REGISTER PENDING state.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.6 P 544 L 23 # 34
 ZHU, ZIJIAN I2R

Comment Type TR Comment Status A

The message MA_CONTROL.indication(register, SA, ID, status, RTT) in this line has not been defined in page 539.

SuggestedRemedy

Suggest adding the definition for this message in page 539 as the following:
 MA_CONTROL.indication(register, SA, ID, status, RTT)
 This service indication is issued by the Discovery Process at the ONU to notify the client and Layer Management that the result of the registration process.
 The parameter SA is the MAC address of the OLT. The parameter ID holds the LLID assigned by the OLT. The parameter status holds the value of accepted/denied/deregistered/reregistered. And the parameter RTT holds the value of round trip time.

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.6 P 544 L 24 # 39
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

Figure 64-20
 Transition from state REGISTER_REQ to state DENIED, criterion OPCODE = REGISTER * flag = Nack is misleading.

SuggestedRemedy

Change to OPCODE = REGISTER * (flag = Nack)

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Change to (opcode = REGISTER) * (flag = Nack)

CI 64 SC 64.3.9.6 P 544 L 30 # 41
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

Figure 64-20
 LOCAL DEREGISTER process:
 ONU after sending REGISTER_REQ in state LOCAL DEREGISTER, in this diagram it would go to REGISTERED state and send REGISTER_ACK. This should not be desired.

SuggestedRemedy

Suggest: Stick to REGISTER_REQ, REGISTER, REGISTER_ACK handshake message exchange sequence.
 Split state REGISTERED into 2 states. See attached diagram Fig64-20.fm

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 See 318 for exact solution

CI 64 SC 64.3.9.6 P 544 L 35 # 43
 ZHU, ZIJIAN I2R

Comment Type T Comment Status A

Figure 64-20
 Transition from state REGISTERED to state REGISTER PENDING, criterion OPCODE = REGISTER * flag = reregister is misleading.

SuggestedRemedy

Change to OPCODE = REGISTER * (flag = reregister)

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
 Use (opcode = REGISTER) * (flag = reregister)

P802.3ah Draft 1.732 Comments

CI 64 SC 64.3.9.6 P 544 L 42 # 4

Tan , Chik Liang

I2R

Comment Type E Comment Status A

Fig 64-20

Suggest adding brackets to the trigger " OP CODE = REGISTER * flag = deregister ".

SuggestedRemedy

Change to (OPCODE = REGISTER) * (flag = deregister)

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.3.9.6 P 544 L 44 # 57

ZHU, ZIJIAN

I2R

Comment Type T Comment Status A

In state LOCAL DEREGISTER, it would be more appropriate to name primitive MA_CONTROL.indication(register_req, status=deregister) rather than MA_CONTROL.indication(register, ...)

SuggestedRemedy

Change to MA_CONTROL.indication(register_req, status=deregister)

Proposed Response Response Status C

ACCEPT.

CI 64 SC 64.4 P 556 L 5 # 425

Thomas Dineen

Dineen Consulting

Comment Type TR Comment Status R

After seeing Bob Gaglianello's presentation from the 05/03 meeting and lisitening to the discussion I have come to agree with Bob regarding his proposed changes the MPCP frame formats.

Therefor I beleive we should update the MPCP frame formats as required by Gaglianello_1_0503.

SuggestedRemedy

Update the MPCP frame formats as required by Gaglianello_1_0503.

Proposed Response Response Status U

REJECT.

Byte alignment is not required for traditional Ethernet protocols, which are byte based and unaligned. MPCP messages are exchanged at rates in excess of 30k per second with very strict timing restratints and are not intended for software implementations - much like PAUSE operation.

There is no benefit to this proposal given the operating environment for the protocol. Additionally space is at a premium in report messages to allow for reporting of multiple queues and future extension of QoS methods.

Original comment refered to was also withdrawn and proposal was not resubmitted.

All:

Y 8

N 1

A 1

802.3:

Y 8

N 1

A 1

P802.3ah Draft 1.732 Comments

CI 64 SC 64.4.2 P 408 L 16 # 99400
 Gaglianella, Bob Lucent Technologies

Comment Type T Comment Status D D1.4 #858

Efficient processing of Gate MPCPDUs is essential for EPON system implementations. The single octet "Flags field" causes all succeeding fields to be misaligned for 16-bit wide logic. Increasing the width of the "Flags field" by a single octet would solve this and not impact 8-bit wide implementations. This would only reduce the amount of Pad/Reserved space by a single octet, from 13-39 to 12-38 octets.

SuggestedRemedy

I propose increasing the size of the "Flags field" in the GATE MPCPDU to 16 bits. Change the "1" on line 16 to a "2", and change the Pad/Reserved "Octets"(line 37) from "13-39" to "12-38". Also, line 1 on page 406 would be changed from "8 bit field" to "16 bit field".

Proposed Response Response Status Z

WITHDRAWN.

CI 64 SC 64.4.3 P 560 L 42 # 568
 Chan Kim ETRI

Comment Type TR Comment Status R

It should be possible to assign the whole upstream bandwidth to a single ONU with report method. Current report unit is in 2-octet. But in former case, the maximum number of bytes that can arrive for example in 2 ms interval is $2 \text{ ms} \times 1 \text{ Gbps} \times 1 \text{ byte}/8\text{bits} = 250000$ bytes, which equals to a report value of 125000. This value is almost twice the maximum value of 65535 that can be represented by 16 bit queue report. So with current report capability, we can report only half the maximum traffic(single queue, single LLID, 2 ms report interval assumed). Further, considering the latency between report and actual gate assignment and application in the ONU, the report capability is far smaller(about one fourth) that is required in practical situation.

SuggestedRemedy

Change the queue report field unit to 4 octets. That is, in the report field definition, change it to "The value represents 4 octet multiples."

Proposed Response Response Status C

REJECT.

An error in the above scenario miscalculates the size of the maximal grant which is also a 16 bit value specified in TQ.

The reporting capability is consistent with the granting capability.

This means that the 2^{16} TQ report matches the 2^{16} TQ maximal grant, so the scenario described does not occur. i.e. it is possible to assign the entire bandwidth to a single ONU with the report method.

In addition, the entire protocol was crafted using TQ unit and is consistent between reporting and granting. Proposal breaks this link and increases complexity of designs. Also fragmentation loss is added, on average increasing guard band by 1 TQ leading to additional bandwidth loss.

Comment response was accepted unanimously during meeting.
 Commenter would be contacted to seek approval by editorial team.

P802.3ah Draft 1.732 Comments

CI 64 SC 64.4.4 P 562 L 17 # 569
 Chan Kim ETRI

Comment Type TR Comment Status A

The definition of pending grants is not clear. It can mean maximum number of grant messages or maximum number of {start,length} pairs. Some readers will be confused.

SuggestedRemedy

Clearly identify that it is maximum number of {start,length} pairs. It's because what counts is the number of such pairs in the grant queue, not frames.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add clarification to specify that the number of pending grants is the number of {start,length,force_report,discovery} vectors in grant queue.

CI 64 SC 64.5.4.2 P 569 L 21 # 201
 Karasawa, Satoru OF Networks

Comment Type E Comment Status A

OM8 is a duplicate of OM7.

SuggestedRemedy

OM8 is omitted.

Proposed Response Response Status C

ACCEPT.

CI 64 SC Figure 64-11 P 522 L 12 # 198
 Karasawa, Satoru OF Networks

Comment Type T Comment Status A

The condition "transmitPending != None" is needed before transmitEnable becomes true (Please see Figure 64-5). Therefore, actions in TRANSMIT READY state should be moved to WAIT FOR TRANSMIT state.

SuggestedRemedy

actions in TRANSMIT READY state should be moved to WAIT FOR TRANSMIT state.

Proposed Response Response Status C

ACCEPT.

See 564

CI 64 SC Figure 64-11 P 522 L 18 # 200
 Karasawa, Satoru OF Networks

Comment Type T Comment Status A

There is no definition of SelectFrame().

SuggestedRemedy

Add the definition of SelectFrame().

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Editor would add definition for SelectFrame()

CI 64 SC Figure 64-11 P 522 L 19 # 199
 Karasawa, Satoru OF Networks

Comment Type T Comment Status A

The transmitPending can have DATA and CONTROL value when some frame is transmitted.

SuggestedRemedy

"transmitPending <= DATA" should be "transmitPending <= DATA or CONTROL".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

See 27

CI 64 SC Figure 64-2 P 510 L 11 # 134
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Is there a reason Figure 64-2 doesn't include the Emulation sublayer and Figure 56-2 does? Seems odd.

SuggestedRemedy

Fix or explain.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Fix 56-2 as emulation layer does not really exist, it is all inside the RS.

P802.3ah Draft 1.732 Comments

CI 64 SC Figure 64-33 P 413 L 1 # 99401
 Hirth, Ryan Terawave Communica

Comment Type T Comment Status D D1.4 #288

REGISTER MPCPDU format is inconsistent with REGISTER_REQ and REGISTER_ACK messages.

All other messages follow the sequence OPCODE, TIMESTAMP, FLAGS. The REGISTER_ACK message goes FLAGS, ASSIGNED PORT while the REGISTER message goes ASSIGNED PORT, FLAGS.

Consistent definitions will clarify the standard.

SuggestedRemedy

Swap the ASSIGNED PORT and FLAGS field in the REGISTER MPCPDU.

Proposed Response Response Status Z
 WITHDRAWN.

CI 65 SC 65 P 574 L 4 # 476
 Brown, Benjamin Independent

Comment Type E Comment Status A

wrong word

SuggestedRemedy

Replace "a Ethernet" with "an Ethernet"

Proposed Response Response Status C
 ACCEPT.

CI 65 SC 65.1.1 P 574 L 21 # 140
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

"acceptable" is misspelled.

SuggestedRemedy

Fix.

Proposed Response Response Status C
 ACCEPT.

Duplicate of #477

CI 65 SC 65.1.1 P 574 L 21 # 477
 Brown, Benjamin Independent

Comment Type E Comment Status A

misspelling

SuggestedRemedy

Replace "qacceptable" with "acceptable"

Proposed Response Response Status C
 ACCEPT.

CI 65 SC 65.1.1 P 574 L 50 # 478
 Brown, Benjamin Independent

Comment Type E Comment Status A

This paragraph should have been deleted

SuggestedRemedy

Delete this paragraph.

Proposed Response Response Status C
 ACCEPT.

CI 65 SC 65.1.1 P 575 L 12 # 480
 Brown, Benjamin Independent

Comment Type E Comment Status A scope_ed

This first sentence says the same thing as info later in this paragraph.

SuggestedRemedy

Remove this first sentence

Proposed Response Response Status C
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

This entire paragraph was deleted as the resolution to comment #481

P802.3ah Draft 1.732 Comments

CI 65 SC 65.1.1 P 575 L 13 # 481
Brown, Benjamin Independent

Comment Type T Comment Status A scope

This paragraph contains info about specific MAC types. This level of detail is not desired.

SuggestedRemedy

Remove this entire paragraph, along with the last sentence in this subclause.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.1.1 P 575 L 25 # 482
Brown, Benjamin Independent

Comment Type E Comment Status R

This comment should have been removed

SuggestedRemedy

Remove it.

Proposed Response Response Status C

REJECT.

This is an issue with the diff file. The editor's note does not exist in the plain version.

CI 65 SC 65.1.1 P 575 L 6 # 479
Brown, Benjamin Independent

Comment Type E Comment Status A

Missing text

SuggestedRemedy

Add "CROSS REF" before 64.3.8

Proposed Response Response Status C

ACCEPT.

CI 65 SC 65.1.2.2 P 576 L 5 # 483
Brown, Benjamin Independent

Comment Type T Comment Status A scope

To remove the detail of different MAC types...

SuggestedRemedy

Replace this sentence with:

"This variable shall be 0 of an ONU MAC and may be 0 or 1 for an OLT MAC."

Replace the text starting on line 8 with:

"This variable shall be set to the broadcast value of 0x7FFF for the unregistered ONU MAC. An enabled OLT MAC and a registered ONU MAC may use any value in this variable."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

Replace this sentence with:

"This variable shall be 0 for an ONU MAC and may be 0 or 1 for an OLT MAC."

Replace the text starting on line 8 with:

"This variable shall be set to the broadcast value of 0x7FFF for the unregistered ONU MAC. Enabled OLT MACs and registered ONU MACs may use any value for this variable."

P802.3ah Draft 1.732 Comments

CI 65 SC 65.1.2.3.1 P 576 L 48 # 484

Brown, Benjamin Independent

Comment Type E Comment Status A scope_ed
/S/ is split across 2 lines

SuggestedRemedy

keep /S/ together on the same line. This same thing applies to page 582, line 5 and page 583, line 48

Proposed Response Response Status C
ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.1.2.3.3 P 577 L 1 # 100

Thomas Dineen Dineen Consulting

Comment Type TR Comment Status R

I am receiving an increasing number of questions from customers which indicate a certain amount of confusion about the implementation of CRC functions and issues of bit ordering.

To assist in clearing up this confusion I am requesting that an informative annex be added to this clause which includes one to three compliant example frames with the associated correct CRC (FCS) value.

These frames will serve as divining rod frames which an implementor can quickly use to verify the integrity of his CRC implementation and thus achieve early inter operability.

SuggestedRemedy

To assist in clearing up this confusion I am requesting that an informative annex be added to this clause which includes one to three compliant example frames with the associated correct CRC (FCS) value.

Proposed Response Response Status U
REJECT.

Page and line number changed to reflect the diff version.

=====

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

CI 65 SC 65.1.2.4.2 P 578 L 31 # 485

Brown, Benjamin Independent

Comment Type T Comment Status A scope
To remove the detail of different MAC types...

SuggestedRemedy

Replace this paragraph with the following:

"If the device is an OLT then the following comparison is made:

- a) the received mode bit is ignored
- b) if the received logical_link_id value matches 0x7FFF and an enabled MAC exists with a logical_link_id variable with the same value then the comparison is considered a match to that MAC.
- c) if the received logical_link_id value is any value other than 0x7FFF and an enabled MAC exists with a mode variable with a value of 0 and a logical_link_id variable with a value matching the received logical_link_id value then the comparison is considered a match to that MAC."

Proposed Response Response Status C
ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

P802.3ah Draft 1.732 Comments

CI 65 SC 65.1.2.4.2 P 578 L 42 # 55
 ZHU, ZIJIAN I2R

Comment Type E Comment Status A
 broadcast value not stated here.

SuggestedRemedy

Suggest define broadcast value to be 0x7FFF here.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Page and line number changed to reflect the diff version.

=====

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

Replace "the Broadcast value" with "0x7FFF"

CI 65 SC 65.2 P 579 L 18 # 486
 Brown, Benjamin Independent

Comment Type T Comment Status A
 wrong word

SuggestedRemedy

Replace "implement" with "introduce"

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Replace with:

"This subclause specifies an optional Forward Error Correction (FEC) mechanism to increase the optical link budget or the fiber distance."

CI 65 SC 65.2.1 P 579 L 27 # 525
 Lee, Hoon ETRI

Comment Type E Comment Status A

It would be better change "Figure 65.3 shows the relationship of this sublayer to the ISO/IEC OSI reference model."

SuggestedRemedy

New text:

"Figure 65.3 shows the relationship between FEC sublayer and the ISO/IEC OSI reference model."

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

"Figure 65.3 shows the relationship between the FEC sublayer and the ISO/IEC OSI reference model."

CI 65 SC 65.2.1 P 579 L 40 # 142
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A
 Awkward word.

SuggestedRemedy

Consider "compliant" instead of "compliance".

Proposed Response Response Status C
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

P802.3ah Draft 1.732 Comments

CI 65 SC 65.2.2 P 580 L 35 # 526
 Lee, Hoon ETRI

Comment Type T Comment Status A scope

It would be better change "where alpha is equal to 0x02."
 See comment #816 on D1.414

SuggestedRemedy

New text:

"where alpha is equal to 0x02 is a root of the binary primitive polynomial
 $x^8+x^4+x^3+x^2+1$."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

"where alpha is equal to 0x02 and is a root of the binary primitive polynomial
 $x^8+x^4+x^3+x^2+1$."

CI 65 SC 65.2.2 P 580 L 42 # 527
 Lee, Hoon ETRI

Comment Type T Comment Status A scope

It would be better change "P(x) is the data vector"
 See comment #816 on D1.414

SuggestedRemedy

Replace "P(x) is the data vector" to "P(x) is the parity vector"

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.2.3 P 580 L 52 # 101
 Thomas Dineen Dineen Consulting

Comment Type TR Comment Status R

I am receiving an increasing number of questions from customers which indicate a certain amount of confusion about the implementation of Error Detection and Correction Functions and issues of bit ordering.

To assist in clearing up this confusion I am requesting that an informative annex be added to this clause which includes one to three compliant example frames with the associated correct Parity value.

These frames will serve as divining rod frames which an implementor can quickly use to verify the integrity of his CRC implementation and thus achieve early inter operability.

SuggestedRemedy

To assist in clearing up this confusion I am requesting that an informative annex be added to this clause which includes one to three compliant example frames with the associated correct Parity value.

Proposed Response Response Status U

REJECT.

Page and line number changed to reflect the diff version.

=====

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

P802.3ah Draft 1.732 Comments

CI 65 SC 65.2.3.1 P 581 L 3 # 145
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

It is more accurate to say "Ethernet packets are received from the PCS." Making this change would also be consistent with 65.2.4.1.

SuggestedRemedy
 Fix.

Proposed Response Response Status C
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.2.3.1 P 581 L 4 # 488
 Brown, Benjamin Independent

Comment Type T Comment Status A scope

From the PCS, there is no /S_FEC/ nor a /T_FEC/

SuggestedRemedy

Replace "/S_FEC/ ordered_set" with "/S/ code-group" and "/T_FEC/ ordered_set" with "/T/ code-group"

Proposed Response Response Status C
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.2.3.1 P 581 L 6 # 489
 Brown, Benjamin Independent

Comment Type E Comment Status A scope_ed

missing comma

SuggestedRemedy

replace "encoder which" with "encoder, which"

Proposed Response Response Status C
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.2.3.2 P 581 L 25 # 143
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The equation seems a bit confusing. What is the term L-Ethernet? Is this supposed to imply the length of the fields of an Ethernet frame? If so, why is L-FCS added separately. Also, L-preamble is only 7 octets and doesn't include the SFD, right?

SuggestedRemedy

Either explain or fix.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

This equation is supposed to represent the number of octets for which parity is considered. This should include the following:

Preamble + SFD + DA + SA + L/T + Data + Pad + FCS

However, the L-Preamble term doesn't include the /S/ nor the potentially dropped octet due to the even alignment within the 1000BASE-X PCS Transmit state diagram. Therefore, coming from the MAC it is impossible to know exactly how many parity octets will be added for a given length frame. Perhaps a formal equation is not the best description of this situation.

Remove this equation and its introductory text, lines 26 & 28.

CI 65 SC 65.2.3.3 P 581 L 35 # 528
 Lee, Hoon ETRI

Comment Type E Comment Status R

It would be better change "The marker framing sequences used are at least 5 octets long, long enough to be detected with very high probability."

SuggestedRemedy

New text:

"The length of the marker is at least 5 octets, long enough to be detected with very high probability."

Proposed Response Response Status C
 REJECT.

This text change doesn't add anything.

P802.3ah Draft 1.732 Comments

CI 65 SC 65.2.3.3 P 582 L 1 # 490
 Brown, Benjamin Independent
 Comment Type T Comment Status A
 missing code-group
 SuggestedRemedy
 Replace "/T/" with "/S/, /T/"
 Proposed Response Response Status C
 ACCEPT.

CI 65 SC 65.2.4 P 582 L 28 # 531
 Lee, Hoon ETRI
 Comment Type T Comment Status A scope
 It would be better change "See CROSS REF 36.3.3 for a complete description of the TBI."
 Because the name of some signals(TBC, RBC0/1, ftx_code_group, COMMA_DETECT)
 between Clause 65 and CROSS REF 36.3.3 are different.
 SuggestedRemedy
 New text:
 "For a complete description of TBI, see CROSS REF 36.3.3, replacing "PMA_TX_CLK" with
 "TBC", "PMA_RX_CLK<0>" with "RBC0", "PMA_RX_CLK<1>" with "RBC1",
 "tx_code_group<9:0>" with "ftx_code_group<9:0>" and "COM_DET" with
 "COMMA_DETECT".
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Were this a formal recirculation ballot, the comment would be out of scope because it
 does not address a change from the previous draft and/or areas affected by a change to
 the previous draft, as was described in the instructions for commenting on this draft.
 =====
 I think it would be easier to change the names in Figure 65-5 rather than call out all the
 name differences. Reconcile the names in Figure 65-5 to match those in the TBI
 description in 36.3.3 where possible.
 Replace TBC with PMA_TX_CLK
 Replace RBC0 and RBC1 with PMA_RX_CLK<1:0>
 Replace COMMA_DETECT with COM_DET

CI 65 SC 65.2.4.2.1 P 582 L 36 # 491
 Brown, Benjamin Independent
 Comment Type T Comment Status A scope
 /T_FEC/ replaces more than just /T/R/ or /T/R/R/
 SuggestedRemedy
 Replace "The /T/R/ or /T/R/R/ is" with "The /T/R/III/ or /T/R/R/III/ is"

Also, add to the end of the last sentence ", replacing the stretched inter-frame"
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Were this a formal recirculation ballot, the comment would be out of scope because it
 does not address a change from the previous draft and/or areas affected by a change to
 the previous draft, as was described in the instructions for commenting on this draft.

=====
 ", replacing the stretched interframe spacing"
 CI 65 SC 65.2.4.2.2 P 583 L 38 # 146
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The word "service" is missing.
 SuggestedRemedy
 Change "*_UNITDATA.indicate primitive"
 to read: "*_UNITDATA.indicate service primitive"
 3 places in sub-clause.
 Proposed Response Response Status C
 ACCEPT.

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CI 65 SC 65.2.4.2.2 P 583 L 48 # 529

Lee, Hoon ETRI

Comment Type T Comment Status A

/T_FEC/ is consist of 5(or 6) special code-groups /T/R/I/T/R/(or /T/R/R/I/T/R/).

While emptying buffer, the latter /T/R/ of the first /T_FEC/ shall be converted to //

So, it would be better change text.

SuggestedRemedy

New text:

"While emptying the buffer, the parity octets, along with the latter /T/R/ of the first /T_FEC/ and the entire second /T_FEC/ are converted to //."

Proposed Response Response Status C

ACCEPT.

CI 65 SC 65.2.5.1.1 P 585 L 34 # 147

Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Can you simply include by reference a set of constants, variables, etc? I haven't noticed this being done in the past...but I haven't inspected all 2000 pages either...

SuggestedRemedy

Maybe nothing!

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

I figured someone would complain about this sooner or later. Clause 37 lists each variable but points to 36 for some definitions. Pethaps this would be a better solution. Do we want to make this change before WG? Probably.

Copy all necessary variables, etc. from Clause 36, replacing "PCS" with "FEC sublayer" where necessary.

CI 65 SC 65.2.5.1.2 P 585 L 34 # 492

Brown, Benjamin Independent

Comment Type E Comment Status A scope_ed

Editor's note is no longer needed

SuggestedRemedy

Remove it.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.2.5.1.2 P 585 L 54 # 493

Brown, Benjamin Independent

Comment Type E Comment Status A scope_ed

missing space

SuggestedRemedy

After the semicolon, add a space here as well as on page 586 on lines 1, 16, 17, 23 and 24.

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

CI 65 SC 65.2.5.1.4 P 587 L 12 # 494

Brown, Benjamin Independent

Comment Type T Comment Status A scope

wrong process

SuggestedRemedy

Replace "byte alignment" with "synchronization"

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 65 SC 65.2.5.2.3 P 588 L 42 # 495

Brown, Benjamin Independent

Comment Type E Comment Status R
extra space

SuggestedRemedy
remove space before period

Proposed Response Response Status C
REJECT.

This space doesn't exist in the actual document.

CI 65 SC 65.2.5.3 P 589 L 49 # 530

Lee, Hoon ETRI

Comment Type T Comment Status A
page 589-590.

It would be better remove "When the receiver is in normal mode," from description of buffer_head_coding_violation_counter, FEC_corrected_blocks_counter and FEC_uncorrected_Blocks_counter.

There is no description of normal mode in the Clause 65.

SuggestedRemedy

Remove "When the receiver is in normal mode," from description of buffer_head_coding_violation_counter, FEC_corrected_blocks_counter and FEC_uncorrected_Blocks_counter.

Proposed Response Response Status C
ACCEPT.

CI 65 SC 65.3 P 590 L 45 # 148

Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Is this 1000BASE-PX OLT or should it be 1000BASE-PX-D? Not sure myself.

SuggestedRemedy
Verify.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====
Replace with 1000BASE-PX-D

CI 65 SC 65.3 P 590 L 47 # 496

Brown, Benjamin Independent

Comment Type E Comment Status A scope_ed
missing text

SuggestedRemedy
replace "clause" with "CROSS REF Clause"

Proposed Response Response Status C
ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

P802.3ah Draft 1.732 Comments

CI 65 SC 65.3 P 590 L 52 # 421
 Dawe, Piers Agilent

Comment Type T Comment Status A scope

This subclause appears to define T_CDR combined with T_Code_group_align, but doesn't make it clear. Also, it's rather untidy that the other times are mainly in ns, while this one is in bit times, which don't have much relevance to the serial data stream being recovered. COM_DET is not defined here, and appears to be part of an optional TBI; need to relate this timing to fig. 36-9. Should be able to sync on idles as well as data. No need to subject the ONU's PMA to this spec.

SuggestedRemedy

"A PMA in an OLT shall become synchronised at the bit and code-group level, as shown by the assertion of ?? (see CROSS REF 36.??) within 500 ns of the appearance of a valid (any particular?) 1000BASE-X pattern, as described in CROSS REF 64.x.y.z, at TP4, when the PMA_TX_CLK frequency is equal to twice the PMA_RX_CLK frequency."

Add text to relate this time limit to the quantities in 65.34.

In 65.4.4.5, Change status of BMC1 to OLT:M.

Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

I agree with making this a requirement for the OLT only.
 I agree with changing BT to ns.
 Change 500 to 400 to reflect adopted value.
 There is no testability interface so this can't be a shall.
 Make Tcode_group_alignment equal to 32 ns (4 code-groups)

"A PMA instantiated in an OLT becomes synchronised at the bit level within 400 ns (Tcdr) and code-group level within an additional 32 ns (Tcode_group_alignment) of the appearance of a valid 1000BASE-X IDLE pattern at TP4 when the PMA_TX_CLK frequency is equal to twice the PMA_RX_CLK frequency."

Remove PICS entry

Replace lines 39-45 with "This subclause describes the CDR lock time measurements."

The timing budget moves to Clause 64.

Sync time comprises:
 Treceiver_settling (400ns)
 Tcdr (400ns)
 Tcode_group_align (32ns)
 Tsync (80 for FEC, 48 for PCS)

CI 65 SC 65.3.1 P 590 L 53 # 532
 Lee, Hoon ETRI

Comment Type E Comment Status R scope

To make consistency, it would be better change "PMA_TX_CLK" to "TBC" and "PMA_RX_CLK" to "RBC"

SuggestedRemedy

Replace "PMA_TX_CLK" to "TBC" and "PMA_RX_CLK" to "RBC"

Proposed Response Response Status C

REJECT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

See comment # 531 - changing names in figure to match the signal names from the TBI spec in Clause 36.

CI 65 SC 65.3.4 P 590 L 42 # 315
 Glen Kramer Teknovus

Comment Type T Comment Status A scope

T_CDR value should be less than 500 bit times or 400 ns.

SuggestedRemedy

Replace "500ns" by "400ns"

Proposed Response Response Status C

ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

=====

See comment #421

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CI 65 SC 65.3.4 P 591 L 43 # 422
 Dawe, Piers Agilent

Comment Type T Comment Status A

Statement that "T_Code_group_align is defined in CROSS REF 36.3.2.4, value is less than 4 octets." doesn't seem to be fully supported by 36.3.2.4, which says "In the event the PMA sublayer detects a comma+ within the incoming rx_bit stream, it may realign its current code-group boundary, if necessary, to that of the received comma+ as shown in Figure 36-3." May, not shall. And then "During the code-group alignment process, the PMA sublayer may delete or modify up to four, but shall delete or modify no more than four, ten-bit code-groups in order to align the correct receive clock and code-group containing the comma+. This process is referred to as code-group slipping." That's 4 slips max, not a maximum time - it doesn't say it must slip at each comma+.

If the burst's training sequence is idles, doesn't only every other code-group contain a comma? That would be 8 code-groups at best, not 4?

SuggestedRemedy

Write out explicitly what a PMA has to do to be usable in burst mode.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Use the value 32 ns (4 code-groups) for the code-group_alignment time.

See comment #421

CI 65 SC 65.3.4 c) P 591 L 42 # 232
 Yokomoto, Tetsuya FUJITSU ACCESS LIM

Comment Type E Comment Status A

65.3.4 c) has following description.
 "Tcdr is defined in 65.3.1 and value is less than 500 nsec"
 However 65.3.1 has following description.
 "In the presence of the received data pattern as described in (See CROSS REF 64.x.y.z), COM_DET shall assert in less than 500 bit times when PMA_TX_CLK frequency is equal to twice the PMA_RX_CLK frequency"
 Moreover, Clause 60 (page:342, line:25) has the following description.
 "Tcdr is defined in section *ref* 65.3.3.1 value is less than 400nsec (defined in *ref* 65.3.1)"
 First, I think that "500ns" in 65.3.1 c) is a mistake.
 Moreover, in accordance with 65.3.1, I think that "ns" should be unified into "bit times" expression.

SuggestedRemedy

I recommend changing description at 65.3.4 c) as follows.
 "Tcdr is defined in 65.3.1, value is less than 500 bit times at the signaling speed (in PMA)"

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

See related comment #421

CI 65 SC 65.3.4.2 P 592 L 14 # 445
 Murakami, Ken Mitsubishi Electric

Comment Type T Comment Status A

The description "The signal at TP4, at the beginning of the locking, may have any valid 8B/10B pattern, jitter, or frequency shift matching the standard specifications." is not consistent with Figure 60-7. Additionally, frequency shift cannot occur because the loop timing is applied to the point-multipoint environment.

SuggestedRemedy

The signal should be IDLE pattern. Additionally, the description related to frequency shift should be removed.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

"The signal at TP4, at the beginning of the locking, is the 1000BASE-X IDLE pattern."

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CI 65 SC 65.3.4.2 P 592 L 5 # 30
 ZHU, ZIJIAN I2R
 Comment Type E Comment Status A
 uplink is not the standard term used throughout
 SuggestedRemedy
 Suggest changing it to upstream.
 Proposed Response Response Status C
 ACCEPT.

CI 65 SC 65.4.4.3 P 593 L # 533
 Lee, Hoon ETRI
 Comment Type T Comment Status A
 It would be better add item according to error monitoring capability.
 SuggestedRemedy
 New item:
 Item : FE3
 Feature : FEC error monitoring
 Subclause : 65.2.5.3
 Value/Comment : Support counters of clause 65.2.5.3
 Status : FEC:M
 Support : Yes[] No[]
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Add this entry to 65.4.4.3
 Value/Comment : Support the error monitor counters

CI 65 SC 65.4.4.3 P 595 L 6 # 149
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status A
 The text in the Value/Comment column seems larger than the balance of the text. Same for 65.4.4.4.
 SuggestedRemedy
 Shrink.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.

Great eyes. You've stolen the "eagle eye" award from Brad on this one. The text in this column is 10 pitch, the text in the other columns are 9 pitch.

CI 65 SC Figure 65-1 P 574 L 35 # 135
 Daines, Kevin World Wide Packets
 Comment Type E Comment Status R
 Figure 65-1 doesn't match Figure 56-2 in that no Emulation sublayer is present. Please explain or fix. Also, see Figure 60-1.
 SuggestedRemedy
 See comment.
 Proposed Response Response Status C
 REJECT.

Clause 65 doesn't describe an Emulation sublayer, only an extension of the Reconciliation sublayer. A comment will be submitted against Clause 56 to remove all references to an emulation sublayer. Comment against Clause 60 as well.

CI 65 SC Figure 65-3 P 580 L 10 # 487
 Brown, Benjamin Independent
 Comment Type E Comment Status A scope_ed
 Empty text block exists behind "MAC-MEDIA ACCESS CONTROL" that blanks out the lines on both sides of the boxes
 SuggestedRemedy
 Delete it in both instances.
 Proposed Response Response Status C
 ACCEPT.

Were this a formal recirculation ballot, the comment would be out of scope because it does not address a change from the previous draft and/or areas affected by a change to the previous draft, as was described in the instructions for commenting on this draft.

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CI 65 SC Figure 65-4 P 582 L 10 # 144
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The figure is a bit misleading since "FCS" is broken out separately from the "Frame". Also, the SFD is missing. Since the term frame is overloaded in this section, we need to be very explicit when we use the term.

SuggestedRemedy

For the first issue identified, suggest either
 a) including all fields of a frame, or
 b) dashing the vertical line separating frame and FCS.

For the second issue, suggest adding SFD between Preamble and Frame.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Use option b for the first issue

Replace "Preamble" with "Preamble/SFD"

CI 65 SC Table 65-1 P 576 L 23 # 141
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

The column header "Preamble" should be "Preamble/SFD". Also the column header "Modified preamble" should be "Modified preamble/SFD".

SuggestedRemedy

Fix. Also, when referencing preamble in 65.1.2.3, also include SFD.

Also, in 65.1.2.4, page 577, line 43 change "preamble" to "preamble/SFD".

Proposed Response Response Status C

ACCEPT.

CI 66 SC 66.6.1 P 599 L 51 # 150
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A

Grammar. Also, there is an unneeded carriage return on line 54.

SuggestedRemedy

Change "not capable to" to read: "not capable of".

Remove carriage return.

Proposed Response Response Status C

ACCEPT.

CI 66A SC Table 66A-1 P 634 L 28 # 153
 Daines, Kevin World Wide Packets

Comment Type E Comment Status A attn

58.1 uses the phrase "center of the network" while Table 66A-1 uses "core of the network". Let's pick one.

SuggestedRemedy

Pick one.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Will use "center of network"